

ARIZONA MEDICINE

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VOL. 11, NO. 11



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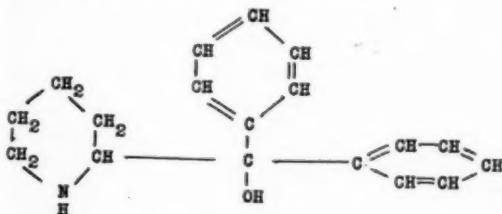
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Original ARTICLES

A PRELIMINARY REPORT OF CLINICAL STUDIES ON A NEW STIMULANT

Robert J. Antos, M.D.
Phoenix, Arizona

THIS is a preliminary report of the studies made using a new stimulant preparation known as Compound MRD-108 or Meratran*. Chemically this substance is not related to the ephedrine or amphetamine compounds, and likewise it has many differences in its action. It has the following structural formula and is named (alpha)-(2-piperidyl) benzhydrol.



The hydrochloride salt is a white odorless powder with a slightly bitter taste. One part dissolves in sixty parts of hot water. For the sake of brevity it is referred to as 108 or PBH.

The toxicity of this compound was determined and compared to that of amphetamine employing the oral, subcutaneous, and intravenous routes of administration in animals. Table I gives the comparative LD₅₀ values and standard errors estimated by the method of Miller and Tainter(1). Animals used were rats.

Results indicate that PBH and amphetamine have similar intravenous toxicity, the LD₅₀ values being almost identical. Subcutaneously

*Meratran is the trade name of the Wm. S. Merrell Co. for its brand of Pipradrol.

TABLE I

	Oral	Subcutaneous	Intravenous
	Mg./Kg.	Mg./Kg.	Mg./Kg.
PBH	180 \pm 22	240 \pm 61	30 \pm 1.6
d1-amphetamine	75 \pm 6.5	67 \pm 7	30 \pm 1.6

PBH is only one-third as toxic as amphetamine, and orally it is only one-half as toxic. The intravenous injection of doses below the LD₅₀ of both compounds caused hyperexcitability which increased in duration and slightly in intensity as the dose was increased. PBH did not cause a subsequent depression which usually followed the activity induced by amphetamine(2).

When the drug was first obtained the only information available was that it was a stimulant to some part of the central nervous system; this was based on animal experiments, and little, if any, had been done on human subjects. The effective human dose was not known. I was my own first subject. Various doses were tried from 0.1 mg. up to 5 mg. at first. Later higher doses were tried. After a few days of hit and miss trials, it was established that the average dose was 1 mg. to 2 mg.

Using 1 mg. as an arbitrary dose the preparation was tried on several voluntary subjects who apparently had no organic disease. Again the effective dose turned out to be 1 mg. to 2 mg. At first only one dose daily was used; then two

and three doses daily were tried. The first apparent effect noticed was that this preparation gave relief of fatigue and daytime "let-down" without interfering with sleep, and just as startling was the observation that there was no suppression of appetite, no elevation of blood pressure and no elevation of pulse rate. Table II gives the observations of the control subjects:

TABLE II

Subject	Dose	Appetite Depression	B. P. Change	Pulse Change	Effect on Sleep
1 M.	2 mg. t.i.d. A.C.	None	None	None	None
2 Fe.	1 mg. t.i.d. A.C.	None	None	None	None
3 M.	2 mg. t.i.d. A.C.	None	None	None	None
4 Fe.	1 mg. t.i.d. A.C.	Slight lowering*	None	None	None

In the doses used there were no apparent untoward effects and all subjects noted a "lift" during the day without interference with sleep. None of the subjects had the "hepped up" feeling nor the appetite depression that they all noted with 5 mg. amphetamine. One subject noted a decided relief of the pre-lunch and late afternoon let-down that usually was present. With this little bit of encouragement, it was decided to try this preparation on other conditions which were accompanied by fatigue, drowsiness, or "let-down feeling."

At first the compound was given to patients with various conditions. It was found that the preparation either reduced or removed drowsiness associated with or produced by the following:

1. Chlorpromazine (without decreasing the antiemetic action). Two subjects.
2. Antihistamines. Four subjects.
3. Rauwolfia drugs. Three subjects.
4. Psychogenic fatigue. Five subjects.
5. Coccidioidomycosis. Two subjects.
6. Hepatitis. Three subjects.
7. Hypothyroidism. Two subjects.
8. Post "artificial hibernation" hangover. Two subjects.
9. Alcoholic hangover. Three subjects.
10. Menopausal depression. Four subjects.
11. Dihydrocodeinone (especially useful in children). Three subjects.

*This could have been psychic. This patient was asked to note if there was any appetite depression. In those subjects not told of appetite effects, no depression was noted.

12. Bromaleate (used in premenstrual tension). Four subjects.

13. Barbiturates. Two subjects.

In each of the above listed conditions there were at least two patients, often four or five. Because of space limitations, they are presented only in list form. More detailed studies will be published subsequently.

After a few weeks of using the preparation it was realized that it had some unusual therapeutic possibilities. Since it was able to relieve fatigue without the patient being "hopped up" it was thought safe to use in diabetics. It was tried in several diabetics and it did not upset their regulation. In one teen-age "brittle" diabetic, who from previous experience was always seriously unregulated by amphetamine, PBH did not affect the diabetes at all yet gave the "lift" it was supposed to give. In one case of enuresis in an older child not helped by the "Enurton" or any other method, 2 mg. of this preparation was given with supper and the lighter sleep induced enabled the youngster to maintain bladder control.

In hypertensive patients PBH was tried on those made drowsy by the rauwolfia compounds. Since it did not elevate the blood pressure of "normal" subjects it was thought safe to try on these patients. It worked beautifully in relieving the drowsiness and did not affect the hypotensive effects of the rauwolfia compounds. One change had to be made in the administration. In those patients who were employing the practice of taking their rauwolfia preparation at bedtime, the new compound was given in the morning on waking, and this procedure worked fine. Some capsules were made up, each containing 1 mg. of PBH or 108 and 2 mg. alseroxylon fraction of rauwolfia. Some of the patients accustomed to taking their medication at night inadvertently did so, and while they did not develop full insomnia, they complained of sleeping lightly. By simply giving the capsules in the morning this difficulty was avoided.

This preparation was also tried on two selected cases of Parkinsonism who did not get any benefit from amphetamine preparations. It did not have any effect on the tremor, but it did relieve drowsiness and apathy.

Several patients who had obtained good relief of premenstrual tension by using bromaleate complained of excessive drowsiness. PBH or

108 was effective in relieving the drowsiness without producing jitteriness and apprehension like that obtained when amphetamine was used in a similar manner.

By comparing the effects of this compound with other drugs whose action is supposedly known it was first thought this was a pure and simple cortical stimulant, but now it is not so certain. Although there is as yet no laboratory evidence to substantiate this theory, it is felt the action of this compound is that of a stimulant to some hypothalamic nuclei.

SUMMARY: Herewith is presented a brief summary of some clinical studies on a new stimulant type compound that is not related chemically to the ephedrine or amphetamine drugs. Its action is to relieve fatigue and elevate mood, yet it does not elevate blood pressure, raise pulse, depress appetite, or give a "hopped up" type of agitation. Although it

produces a lighter sleep if taken late in the day, it apparently does not produce true insomnia like the amphetamines do. There have been under study several control subjects for periods up to thirty-five weeks who took daily doses of this compound of 2 mg. to 12 mg. During this period no disturbance was found in the WBC, RBC, sedimentation rate, hemoglobin, hematocrit, serum proteins, thymol turbidity, blood smears, blood sugar, and no skin rashes were observed.

It is concluded, therefore, that 108 or PBH is a safe drug to use. Especially in those cases where amphetamine preparations would be contraindicated this new compound is safe to use. In the doses used no untoward effects were noted.

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20 West Riverside Street

PROPHYLAXIS OF SURGICAL KELOIDS*

Jules Leonard Whitehill, M.D.
Tucson, Arizona

THE words of Ambroise Pare "I treat, God heals" are as true today as they were in the sixteenth century. Pare, who contributed much to modern concepts of wound treatment, understood clearly that the surgeon's role consisted merely of anatomical apposition of the injured tissues. The actual processes of wound repair which are inherent within the organism were not understood in Pare's time and are still incompletely explained.

The repair of an incised wound (or for that matter any wound) is initiated by complex biochemical and biophysical reactions to substances which are liberated in the wound by local tissue destruction. Locally, this reaction consists in the first twenty-four hours of capillary dilatation, outpouring of transudate into the intercellular spaces and migration into the area of wandering tissue cells and leukocytes. In the next five days there occurs a proliferation of fibroblasts, the laying down of collagenous material by the fibroblasts, proliferation of capillaries and ingrowth of surface epithelium from both edges of the wound. Early wound healing is complete in about one week and a fine pink scar remains. New blood vessels and fibro-

blasts are gradually squeezed out of the scar by shrinkage of the collagenous material and a white line eventually replaces the pink scar. The essential elements in the healing of deep structures such as connective tissue, muscle and fascia consist of fibroplasia and deposition of collagen.

Although the factors which initiate wound healing are known, the factors which halt the repair process at the proper time are not understood. Why fibroblasts do not continue to proliferate in the wound and lay down more and more intercellular substance, why epithelium does not continue to grow and why capillaries cease to proliferate at the proper time still remains a mystery. As a matter of fact, in certain instances these processes may be over stimulated or the factors which inhibit excessive response no longer operate. An exaggeration of the normal repair process is seen in the development of hypertrophic or keloidal scars.(1).

A keloid results from excessive fibroplasia and from excessive production of collagen. The scar becomes broad and raised underneath its epithelial covering. There is no clear differentiation between a Keloid and a scar which is hypertrophic. These two processes are probab-

*Presented October 5, 1954 at a Staff Meeting of the Tucson Medical Center, Tucson, Arizona.

ly one and the same, the term keloid being applied usually to any markedly hypertrophic scar.

Normal wound healing is dependent upon careful anatomical apposition of the tissues, a good state of nutrition, absence of infection and an adequate systemic supply of vitamins C and B complex. Keloid formation, on the other hand, occurs more frequently in poorly apposed wounds, inflamed wounds, wounds in which there is an accumulation of serum and in wounds which have been exposed to certain types of radiation such as those of the Hiroshima and Nagasaki survivors. The common etiological factor in all such wounds would appear to be an excess of irritant stimuli.

The more frequent occurrence of Keloids in the pigmented races has never been explained. This would appear to be part of a systemic tendency towards increased fibroplasia manifested also by frequency of post-operative intra-abdominal adhesions and increased incidence of fibromyomata of the uterus.² Climate plays an unexplained role in the development of Surgical Keloids. All other factors being equal, it is the impression of the author that there is an increased incidence of Keloids in the southwest as opposed to the northeastern portions of the United States. These Keloids occur both on the covered and uncovered surfaces of the body. Higher skin temperature rather than greater solar radiation may explain this phenomenon.

An unsightly keloidal scar often converts an otherwise satisfactory surgical result into a source of embarrassment for both patient and surgeon. Itching and burning of the scar frequently add to the discomfort of the patient.

This study in prevention of Surgical Keloids was stimulated by the reported effects of cortisone and ACTH on wound healing and cell growth.^(3, 4, 5, 6, 7) Soon after the use of cortisone and ACTH became widespread in the treatment of arthritis and asthma, there were reports of poor wound healing in patients receiving such therapy.⁽⁸⁾ Other reports concerned the aggravation and perforation of peptic ulcers and fulminating progression of acute appendicitis in patients receiving these drugs.⁽⁹⁾ At the same time, laboratory investigations of the effects of cortisone, hydro-cortisone and ACTH on healing of experimental wounds in animals and on tissue cultures confirmed the

inhibition by these drugs of fibroplasia, collagen formation, capillary proliferation and epithelial growth.^(3, 10, 13) The reports confirmed impairment in the healing of tendons and of fractures in patients receiving cortisone and like substances.^(11, 12) It was apparent that all these phenomena could be explained by the proven effects of hydrocortisone on the processes of inflammation and repair.⁽¹³⁾ The inhibition of blood vessel proliferation and dilatation, transudation, leukocytic infiltration, fibroplasia, collagen formation and epithelialization produce favorable responses in the aseptic rheumatic inflammations and dermatoses. Paradoxically, such inhibition is also responsible for retarding the normal defenses which prevent extension of septic inflammatory processes in the abdomen.

These observations lead us to consider the use of hydrocortone for the prevention of keloidal scarring in surgical wounds. It did not seem reasonable to suppose that an already formed Keloid would respond to cortisone or its derivatives, but it did seem possible that the inhibitory effect of these substances on the formation of fibrous tissue might be of use prophylactically. A number of considerations prompted the use of hydrocortone rather than cortisone.^{**}

Hydrocortone is frequently effective in the treatment of dermatoses when cortisone is ineffective.

Weight for weight hydrocortone is more effective than cortisone when administered systemically. The latter probably acts by partial conversion to hydrocortone within the organism.

Subsequent review of the literature revealed a number of instances in which cortisone was applied locally or injected subcutaneously in the region of wounds with a view toward prevention of recurrence of excised Keloids. These reports indicated that cortisone was not effective or was questionably effective locally.^(14, 15, 16, 17)

Method:

A series of 115 surgical cases from the private service of the author are reported herewith. These consisted chiefly of abdominal operations. No wounds were used which were less than two inches in length and exposed wounds were

^{**}The material for these investigations was kindly supplied in the form of Cortef ointment by the Upjohn Corporation and the investigation was aided by a grant from the Upjohn Corporation.

avoided for cosmetic reasons. All have been observed for one to nine months.

At the termination of each surgical procedure, after the skin sutures has been completed, a liberal layer of hydrocortone (Cortef) ointment about one inch wide was applied to the lower half of the wound. The ointment was supplied in a water soluble base, surgically clean but not sterilized. The entire wound was then covered with a layer of vaseline gauze to prevent absorption of the ointment into the gauze dressings. In the first fifty cases a 1% hydrocortone (Cortef) ointment was used. In the remainder of the series a 2½% ointment was used. The method of wound closure in most cases consisted of chromic catgut for the deeper layers, plain catgut for the subcutaneous tissues and fine vertical mattress sutures of plain silk for the skin. In a few cases buried figure of eight steel wire sutures were used for the abdominal wall; and in hernioplasties all-silk technique was used. The actual method of closure seemed to make no difference in the end results. In all cases only one application

of the ointment was made. This ointment and the vaseline gauze were left in situ until the seventh post-operative day.

Results:

At the end of one week, at the time of removal of the skin sutures, there was a definite difference in the treated and untreated halves of all wounds. The slight erythema which ordinarily surrounds each skin suture was completely absent in the treated half of the wound. In addition there was less edema in the treated half as evidenced by a greater looseness of the skin stitches. These changes indicated a reduced inflammatory response in the treated portions of the wounds.

In the series of 115 cases, 8 wounds developed a scar which was sufficiently hypertrophic to be classified as a Keloid. In each of the 8 cases the Keloid was entirely or largely confined to the upper or untreated half of the wound, the lower or treated half being free from such change. In 2 of the 8 cases the Keloid stopped



Fig. 1. Example of Keloid of upper (untreated) half of appendectomy wound. The Keloid ends abruptly at the center of the wound and is absent in the lower (treated) half. The Keloid was present six weeks postoperatively and is unchanged after nine months.

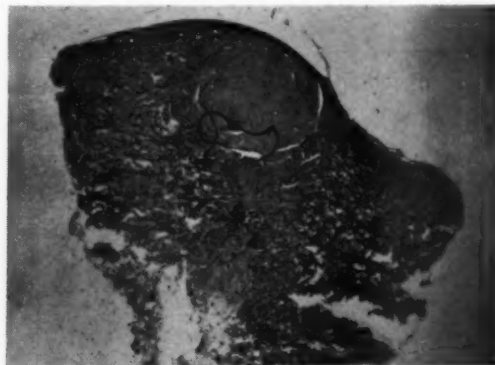


Fig. 2. Microscopic section through upper (untreated) half of scar excised by a second stage Whipple operation. Note Keloid formation.

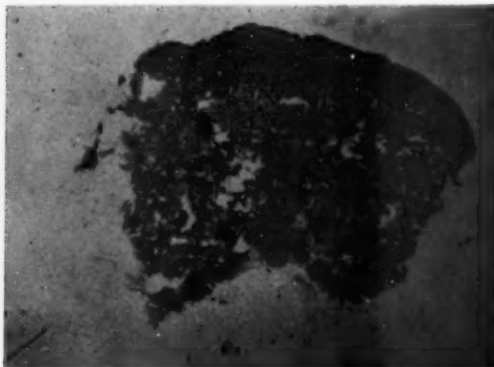


Fig. 3. Microscopic section through lower (treated) half of same scar as in Fig. 2. Note absence of Keloid.

abruptly in the center of the wound. These 2 cases were early in the series when vaseline gauze was placed over the lower half of the wound only, thus sharply delimiting the ointment. In 4 of the 8 cases there was a transition in the center of the wound from a thick Keloid above to a complete absence of Keloid below. In 2 cases the lower half of the wound was not completely free from Keloid, there being a fine Keloid as opposed to a heavier Keloid within the upper half. One of these was a case of gastric resection for bleeding duodenal ulcer at four months of pregnancy. The patient went to term. It is well known that keloidal tendencies are markedly aggravated during pregnancy.

Conclusions:

A series of 115 surgical cases is reported here-with in which one half of the surgical wound was treated at the completion of surgery with a single application of hydrocortone. The healing process in the treated portions of the wounds was more benign with less evidence of post operative inflammatory reaction in the treated segments. Eight cases of Keloids developed in this series. In 6 there was a complete inhibition of keloid formation in the treated segments of the wounds and in 2 cases there was partial inhibition of keloidal formation. One of the 8 cases was reoperated upon with excision of the scar and the same sequence of events reoccurred after treating the second wound in like manner. A Keloid resulting from excision of a sebaceous cyst not previously treated with hydrocortone was excised. After treatment

with hydrocortone ointment this Keloid has not recurred. No evidence of wound weakness, infection or other untoward reaction occurred in this series.

Further investigations are in progress. On the basis of the current series, it would appear that post operative surgical Keloids can be prevented by application of hydrocortone ointment to the wound at the time of completion of surgery. It is recommended that such prophylaxis be made routine in the exposed areas of the body and in patients with a known keloidal tendency.

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ROENTGEN ASPECTS OF PANCREATIC DISEASE *

By Lester W. Paul, M.D.

Madison, Wisconsin

Examination of the pancreas remains one of the least satisfactory of the roentgen studies of the abdominal viscera. To date no method has been devised to render the organ radiopaque, or at least none which can be applied readily by the average roentgen department. The pancreas, situated as it is in the retroperitoneal area, without a fatty capsule to render its borders distinct, cannot be visualized by ordinary roentgen technique. The roentgenologist, therefore, must depend upon the changes which pancreatic disease may cause in adjacent structures, particularly the stomach and duodenum, and to a lesser extent upon alterations in motility of the small intestine. Only when abnormal calcific deposits are formed within the gland or its ducts is there direct roentgen evidence of disease. In the majority of instances some degree of enlargement of the gland, either by inflammation or tumor, must take place in order that roentgen signs may be produced. It follows that differentiation between malignant tumors and inflammatory enlargements must, at times, be impossible to make; also that other masses in the immediate vicinity of the pancreas such as enlarged retroperitoneal lymph nodes may simulate pancreatic enlargement.

In spite of all of these drawbacks roentgen examination does play a part in the diagnosis of pancreatic disease. Occasionally the roentgenologist may be the first to draw attention to the possibility that pancreatic disease exists and thus alert his clinical colleagues to the need for particular study in this field.

Acute Pancreatitis

Some degree of ileus is likely to be present during an attack of acute pancreatitis, manifested by abnormal accumulations of gas in the small intestine and colon. Gas distention of a single loop of jejunum, the so-called "sentinel loop", has been reported as a significant finding in acute pancreatitis(3). Such a finding has also been described as occurring in other localized acute inflammatory conditions within the abdomen such as acute cholecystitis and appendicitis and is, therefore, not specific. Localized gas distention of the transverse colon or the splenic flexure area of the colon also

has been noted in acute pancreatitis. In our experience such signs have been too non-specific to be of much aid. Even when generalized ileus is present it may be due to a number of causes and cannot be regarded as a diagnostic sign of acute pancreatitis. Localized gas distention of a segment of bowel always suggests the possibility of an acute inflammatory lesion in the vicinity but the roentgen findings must be carefully correlated with the clinical observations before any definite conclusions can be drawn. Other findings have been reported as suggestive of acute pancreatitis including stasis and spasm of the duodenum, and enlargement of the duodenal loop but these are of questionable value unless correlated with the clinical signs.

Pancreatic lithiasis

Perhaps the most striking roentgen evidence of pancreatic disease is offered in those cases where calcific concretions can be demonstrated within the pancreas or its ducts. That this condition is not uncommon is indicated by the fact that Lemmer and Schmidt(5) were able to collect 40 cases at the University Hospitals seen during a 15 year period. The roentgen signs of pancreatic lithiasis vary from the demonstration of a few small calcific deposits to widespread calcification throughout much of the gland. The calcifications are prone to occur in the head of the gland and when few in number are likely to be found in this region. Thus they may be overlooked in routine postero-anterior projections of the abdomen since the head of the pancreas overlies the lumbar spine and the small calculi are readily obscured by the density of the spine. Because of this it is our custom when searching for such stones to make the roentgenograms with the patient in a slightly oblique position. This projects the pancreatic head area to one side of the spine. If suspicious shadows are visualized a barium meal is given and the relation of the calcifications to the duodenal loop studied. In this manner it usually is possible to localize the shadows satisfactorily and be reasonably certain of their nature. When the calculi are numerous there is usually little doubt as to the nature of the process since the character of the

*From the Department of Radiology of the University of Wisconsin and the University Hospital, Madison, Wisconsin.

shadows and their distribution are generally quite diagnostic.

Enlargement of the pancreas

Enlargement of the pancreas can result either from inflammation or neoplasm. In most cases the differentiation cannot be made from roentgen evidence alone. Exceptions occur when a carcinoma of the pancreas invades the stomach or duodenum, in which event the signs of malignant disease may be obvious. Otherwise the roentgen changes are dependent upon pressure on and displacement of the stomach or duodenum, evidence of a dilated common bile duct, or alterations in motility of the small bowel(1, 4, 6).

1. Enlargement of the duodenal loop. — Since the duodenum surrounds the head of the pancreas any appreciable enlargement of the head may cause the duodenal loop to assume an enlarged and rounded curve. This sign has long been described as one of the important roentgen features of pancreatic enlargement. It is of considerable diagnostic value when present but minor to moderate degrees of enlargement are difficult to recognize. The normal curve of the duodenum varies considerably in different individuals. In the presence of obesity it is always quite round and smooth and may actually appear pathologically enlarged since the stomach lies high and transverse. Enlargement of the duodenal loop of pathologic nature should be diagnosed with considerable caution in such individuals.

2. Forward displacement of the stomach. — This is another sign which is difficult to evaluate unless the displacement is of considerable degree. It is best demonstrated with the patient placed in a right lateral position. The normal distance between the posterior surface of the stomach and the anterior border of the spine varies considerably in different persons, and is much influenced by the habitus of the individual. It is wide in obese persons or in others where the stomach is high and transverse in position. A distended colon, the presence of ascites, or a large mass such as an ovarian cyst may cause the retro-gastric space to appear unusually wide. This sign is of limited value, therefore, unless well defined and associated with some of the other findings listed below.

3. Changes in the mucosal pattern of the duodenum. — Perhaps a more significant roentgen observation than enlargement of the duodenal

curve or forward displacement of the stomach is the effect of pancreatic enlargement upon the mucosal pattern of the duodenum, particularly the descending portion. The folds may appear unusually thick and rigid. They may be flattened along the inner side and normal on the outer. In the presence of carcinoma actual invasion of the duodenal wall may be demonstrable by loss of the mucosal pattern and irregular nodular protrusions into the duodenal lumen; or constricted stenotic areas may be produced leading to duodenal obstruction. The transverse portion of the duodenum where it passes over the pancreas may show evidence of compression with flattened mucosal folds.

4. The reverse figure 3 sign. — Frostberg(2) called attention to a distinct alteration in the appearance of the inner wall of the descending duodenum in cases of pancreatic enlargement which he described as the reverse or inverted figure 3. The swelling of the pancreas, the result of either inflammation or neoplasm, may cause a bulging of the gland into the duodenal lumen around the papilla of Vater. A smooth filling defect above and below the papilla results resembling a figure 3 in reverse.

5. Evidence of a dilated common bile duct. — Since the common bile duct lies in close relationship to the duodenum, usually crossing just posterior to the junction of the first and second portions, dilatation of the duct may result in a pressure defect on the duodenum. This may be in the form of a band-like compression or flattening of the duodenum, or a sharp angulation of the apex of the duodenal bulb and its continuation into the descending portion. The right lateral position is of value in showing this deformity but it also can be demonstrated frequently in the standard right anterior oblique position. While this sign only indicates obstruction of the distal portion of the common duct its significance in relation to pancreatic disease is obvious. Tumors of the peri-ampullary region are prone to cause dilatation of the common duct early in their course and this may be the only roentgen abnormality that can be demonstrated.

6. The "pad" sign. — This sign, described by Case(1) and recently re-emphasized by Hodes et al(4), is often found when enlargement of the pancreas is present. It is manifested by a localized, smooth, pressure-type of deformity, usually on the inferior surface of the gastric

antrum or duodenal bulb. Occasionally it may be observed along the superior surface of the bulb or antrum since the relationships of the stomach and pancreas need not be constant. Hodes et al point out that the sign is best brought out by having the patient face the top of an upright fluoroscopic table and then tilting the table slowly toward the horizontal position under fluoroscopic observation. Pressure of the spine on the gastric antrum can simulate the pad sign when the patient is prone on the fluoroscopic table but the effect of pressure from an enlarged pancreas will appear before the table has reached a horizontal position. Careful palpation of the abdominal wall with the patient upright also may demonstrate this defect.

7. Cholecystography in the presence of pancreatic disease. — When the common duct is obstructed and liver function decreased the gallbladder, of course, does not become visualized. Using one of the newer cholecystographic media, such as Telepaque, it is usual to be able to visualize the common duct when good gallbladder function is present. This occurs most frequently during the phase of gallbladder contraction following a fat meal. When the position recommended by Kirklin is used, visualization of the common duct is possible in a very high percentage of cases. In this projection the patient lies on his right side with the film holder placed in front and the roentgen tube behind. The rays are directed horizontally through the body. Recently it has been indicated that early obstruction of the common duct might be recognized in cases where gallbladder function still was adequate(4). This sign may prove to be of considerable value since it now is possible to frequently vis-

ualize the common duct during cholecystography.

Summary and Conclusions

1. Roentgenologic demonstration of pancreatic disease, depends, largely, upon the effects of pancreatic enlargement on contiguous structures, particularly the stomach and duodenum.

2. Enlargement of the duodenal loop and forward displacement of the stomach are valuable signs of pancreatic involvement but are difficult of evaluation in many cases.

3. Of greater importance are changes in the mucosal folds of the duodenum, local pressure defects on the duodenum and gastric antrum, and signs of common duct obstruction. These signs usually are not specific for any one disease and may occur with chronic pancreatitis or with neoplasms involving the pancreas, the ampulla, or the common duct. Other masses in the immediate vicinity of the pancreas can produce similar signs.

4. In acute pancreatitis a localized, dilated, gas-filled loop of small intestine may be present in the upper abdomen. In other cases the roentgen signs are only those of generalized paralytic ileus.

5. Pancreatic lithiasis usually gives clear-cut roentgen findings particularly when the calculi are extensive. When few in number the calcifications may be obscured by the vertebrae, in routine films of the abdomen.

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PHOENIX *Clinical* CLUB

The Case History in this discussion is selected from the Case Records of the Massachusetts General Hospital, and reprinted from the New England Journal of Medicine. The discussant under Differential Diagnosis is a member of the staff of the Massachusetts General Hospital. The other discussants are members of the Phoenix Clinical Club.

MASSACHUSETTS GENERAL HOSPITAL PRESENTATION OF CASE

A fifty-nine-year-old man was admitted to the hospital because of dyspnea and weakness.

One year before admission, after an attack of syncope, the patient was told by his physician that he was anemic and had a high blood pressure. He subsequently became dyspneic, developed nocturia and noted that his face was swollen. He believed that the urine was pink at this time. A few months before admission increasingly severe dyspnea and orthopnea developed, but he noted no chest pain, cough or ankle edema. A few weeks before admission he became very weak so that he was unable to walk, became dyspneic at rest and experienced severe itching.

Twelve years before admission the patient entered another hospital for the removal of a mass in the soft tissue about the right elbow that had been growing for seven years. The mass was diagnosed as osteogenic sarcoma. He refused amputation but received x-ray therapy.

Physical examination revealed a pale, dyspneic man, with many excoriations over the arms and legs. The breath was uremic. No hemorrhages or exudate was seen in the fundi. The chest was clear except for dullness to flatness and diminished tactile fremitus over the left base posteriorly. The size of the heart could not be estimated. The sounds were of good quality. There was slight pitting edema of the hands and feet.

The temperature was 98.6°F., the pulse 88, and the respirations 35. The blood pressure was 200 systolic, 100 diastolic.

The urine had a specific gravity of 1.008 and a pH of 4.5 and gave a 3 plus reaction for albumin; the sediment was loaded with red cells and numerous white cells. Examination

of the blood disclosed a hemoglobin of 7 gm. and a white-cell count of 16,000, with 84 per cent neutrophils. The nonprotein nitrogen was 190 mg., the calcium 5.4 mg., and the phosphorus 6.6 mg. per 100 cc.; the carbon dioxide was 10.4 milliequiv. per liter. A roentgenogram of the chest showed a large accumulation of pleural fluid on the left, which extended to the mid-thorax. A rounded density was observed adjacent to the left hilar region. It measured roughly 4 by 5 cm. and extended to the mid-lung field. Increased markings, thought to be due to congestive heart failure, were present.

The patient was sedated and given calcium, Amphojel and digitalis. He improved symptomatically, but the blood chemistry findings were altered very slightly. On the fifth hospital day 1050 cc. of yellow, turbid fluid was removed from the left pleural space; this contained 2000 red cells and 250 white cells, mostly lymphocytes, per cubic millimeter, and had a specific gravity of 1.012. A smear was negative for tumor cells. Beginning on the sixth hospital day, occasional generalized convulsions occurred. The serum calcium at this time was 4.9 mg., and the phosphorus 10.7 mg. per 100 cc. The urine remained acid (pH of 5), and the specific gravity remained at 1.008 to 1.010. All specimens of urine examined gave a 2 plus or 3 plus reaction for albumin. After the first specimen was examined no red cells could be identified, and only one other specimen contained a few white cells; casts were infrequently seen. Transitory auricular fibrillation occurred on the sixth hospital day. An x-ray film showed clearing of the lung fields, but the mass remained and contained areas of speckling. Lumbar puncture on the seventh day revealed clear spinal fluid that contained no cells, and had 54 mg. of protein per 100 cc. The convulsions, which he continued to have, were described as beginning on the left side, with diminished reflexes in the left arm and leg. He remained semi-stuporous and died on the nineteenth hospital day.

LESLIE R. KOBER, M.D.

The obvious diagnosis in this case would seem to be Bright's Disease with hypertension, ure-

mia, and death on the 19th day. It goes without saying that such a simple case would not be selected for Clinical Club discussion. The diagnostic problem would seem to center about the tumor mass in the left lung adjacent to the hilar region.

We are given the diagnosis of osteogenic sarcoma of the right elbow for which amputation had been refused 12 years previously. Did x-ray therapy cure this tumor, or is the mass in the lung a metastatic growth? Does the nephritis result from metastases to the kidneys? There seems to be nothing else in this man's history to indicate any other cause for his nephritis, but one cannot rely entirely on a history, which seems to be as brief as this, for an etiological basis for a final diagnosis.

Certainly, the first thought would be that a tumor removed 12 years ago and treated with x-ray must have been cured. At least we can say a 5 year cure was obtained. Does this tumor in the lung then represent an entirely different growth? Is the primary site in the kidneys? Were his final Jacksonian type convulsions due to brain metastases?

Now we see why this case was picked for discussion.

Coley and Harrold (J. of Bone and Jont Surg., 32-A, p. 307, April 1950) reported 59 cases of Osteogenic Sarcoma with survival for five years or more, from the Memorial Hospital in New York City. The greatest number of five-year survivals were treated surgically. Of fifty-seven patients with involvement of the long bones, fifty-one had amputation or disarticulation and six had conservative surgery; lesions in five of the six were chondrosarcomata. Two cases of fibrosarcoma were treated by irradiation alone.

The histological type of sarcoma encountered in this group of 59 cases reveals that two-thirds were of fibrosarcoma or chondrosarcoma type. Of the latter, histological examination showed the majority were of relatively low-grade malignancy and had arisen as secondary chondromyxosarcomata from a pre-existing area of cartilage in an abnormal situation.

Five of their cases died of sarcoma after having survived for more than five years, so that they contend this is not a sufficiently long period of time on which to base end results. One patient was ambulatory 15 years after amputation but had a large pulmonary metastasis.

Two other cases had lobectomy performed for pulmonary metastases discovered late in the course of the disease. The tumors in both cases were low-grade chondrosarcomata.

We certainly must give sarcoma first place in our case as the primary diagnosis.

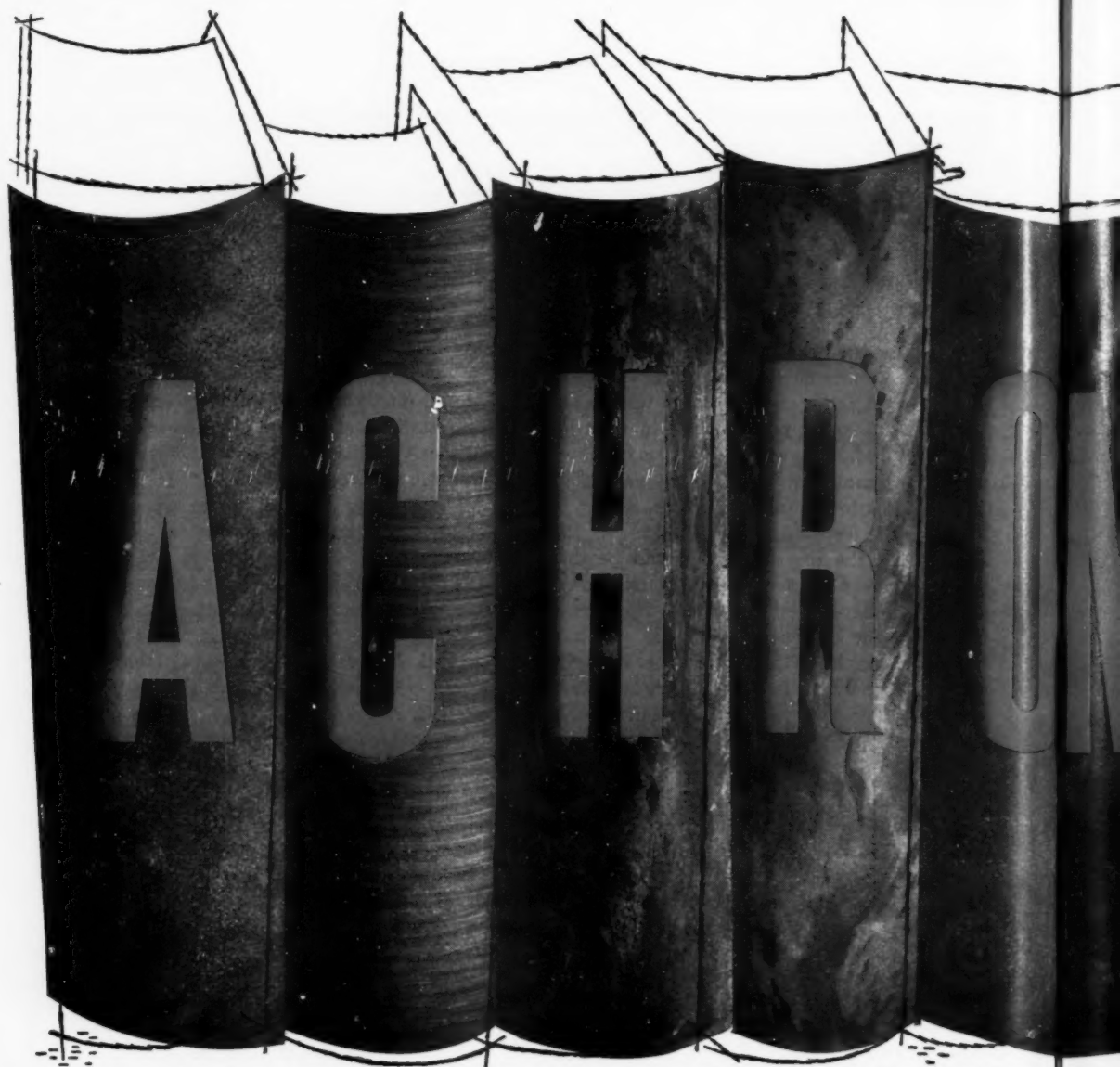
My opening statement that the obvious diagnosis is Bright's Disease with hypertension and uremia, however, seems to be well borne out by the clinical and laboratory findings.

I use Bright's Disease to cover all cases of bilateral renal disease. The three major clinical manifestations of chronic vasculo-renal disease are renal insufficiency, hypertension, and the nephrotic syndrome.

In classifying bilateral renal disease I like that given by Pruitt (Classification of Bilateral Renal Disease, Pruitt, Raymond D.; Med. Cl. of N.A., July 1951, P. 959), as follows:

- I. Primary glomerular lesions
 - A. Glomerulonephritis
 - B. Inter-capillary glomerulosclerosis (Kimmelstiel-Wilson's Disease)
 - C. Amyloid Disease
 - D. Disseminated lupus erythematosus
 - E. Eclampsia.
- II. Primary vascular lesions.
 - A. Senile arteriosclerotic kidneys
 - B. Periarteritis nodosa
 - C. Diffuse arteriolar disease with hypertension (essential hypertension).
- III. Tubular lesions
 - A. Degenerative type secondary to poisonous agent; (for example, mercuric chloride or carbon tetrachloride.)
 - B. Obstructive type
 1. Multiple myeloma
 2. Transfusion reactions
 3. Sulfonamide intoxication.
- IV. Chronic Diffuse Nephritis
 - A. Chronic pyelonephritis
 - B. Bilateral hydronephrosis
 - C. Polycystic disease
 - D. Leukemic or lymphoblastomatous infiltration.
- V. Secondary renal failure
 - A. Functional renal ischemia
 - B. Renal hypotension
 - C. Dehydration.

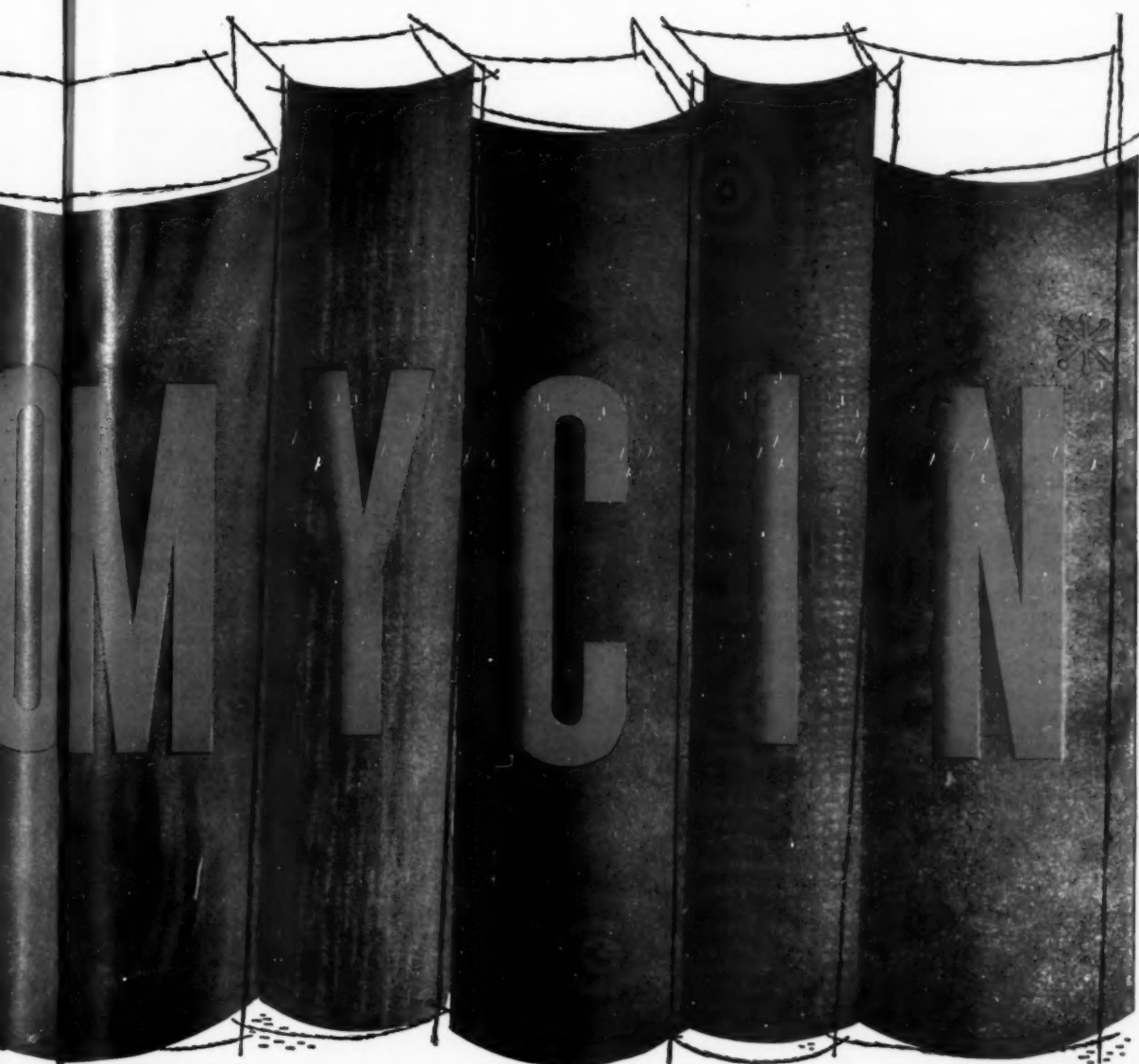
In looking over this list and trying to correlate the clinical findings in our case, we can, I believe, readily eliminate many of the above types of renal disease.



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Those which should be given consideration are Glomerulo-nephritis, Amyloid disease, disseminated lupus erythematosis, any one of the primary vascular lesions, or any of the obstructive types of renal disease such as occur with myeloma or lympho-blastomatous infiltration.

Azotemia, hypocalcemia, hyperphosphatemia, hematuria and albuminuria without significant retinal changes seems rather unusual in view of the apparent uremia, hypertension, and convulsive seizures.

We are led to wonder about the possibility of a sarcomatous lesion involving the kidneys as well as the lungs. Also the Jacksonian type convulsions seem more likely to be due to metastatic lesion in the brain rather than the edema of terminal uremia.

By the time I get around to discussing the various types of tumors of the lung such as adeno-carcinoma, lymphoblastoma, etc., I am, as you see, pretty well sold that this is not a case of primary lung tumor, and not even a case of primary hypertensive cardio-vascular disease.

I have so well convinced my self that this is a case of delayed metastasis from osteogenic sarcoma that I am going to cut out the rest of a lengthy discussion and say:

My diagnosis is:

- (1) Osteogenic sarcoma probably chondrosarcoma with metastases to kidney, lung and brain, or
- (2) Cured osteogenic sarcoma with lymphomatous tumor in lung and secondary Glomerulo-nephritis, hypertension and uremia.

DIFFERENTIAL DIAGNOSIS

DR. RITA M. KELLEY: May I see the x-ray films?

DR. WILLIAM R. EYLER: We have two sets of chest films taken five days apart. In the antero-posterior film taken with the patient lying in bed, there is a good-sized collection of fluid obscuring the left lower portion of the chest. The mass described in the protocol is seen in the upper lobe lying close to the lung root, I think, and away from the bronchus. There is a collection of small calcifications, but in the lateral view I cannot be certain that the calcifications are not super-imposed on the lesion. I think the left lower lobe is somewhat reduced in size. I cannot exclude the possibility of a primary lung tumor. A metastasis from a kidney might give this appearance.

The bones show fairly marked degenerative

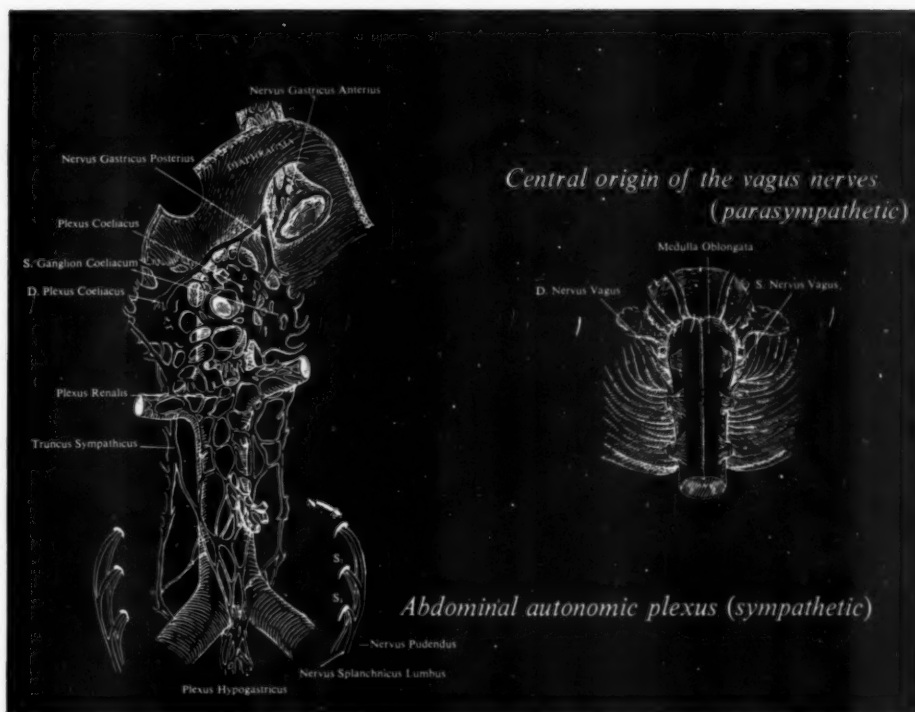
changes. There is some wedging of the thoracic bodies but no bone destruction. The changes could be on the basis of osteoporosis. In later films made with the patient in a sitting position the mass is again seen, the heart is enlarged with nonspecific configuration, the aorta is elongated, and fluid again obscures the left lower portion of the chest.

In the abdominal films, the left kidney, I believe, is small. I cannot trace the right kidney. The spleen is probably not enlarged; its right lobe is below the costal margin. The diaphragm is fairly low. There is not bone destruction. The films are of a poor quality so I am sure I could miss an abdominal mass.

DR. KELLEY: This fifty-nine-year-old-man entered the hospital in a terminal state, bearing the stigmas of two major pathologic processes; renal disease and a mass in the chest, along with the history of a malignant tumor that commonly metastasizes to the lungs. I think the two are unrelated and should like to discuss the former first as the likeliest cause of death.

This patient died manifesting most of the classically described signs of advanced uremia of fairly long standing; hypertension, anemia, edema, pruritus, convulsions, urine of fixed specific gravity, albuminuria, hematuria, elevated nonprotein nitrogen, hyperphosphatemia, hypocalcemia and acidosis. The pleural effusion may have been a consequence of uremia with congestive heart failure or of the independent pulmonary disease. The one discordant note in the uremic picture is the absence of obvious alteration in the fundi. I should like to think they were not adequately visualized because of narrowness or fixation of pupils, but I have no way of knowing whether this was so. In any event, while unusual, this isolated negative finding cannot detract significantly from the remainder of the clinical and laboratory picture. There was good circumstantial evidence that the process had been evolving for considerably longer than one year prior to his death, in that anemia, hypertension, nocturia, facial edema and probably hematuria were present at that time.

There come to mind four major entities that can produce in their terminal phases the non-specific uremic syndrome. When the patient is seen for the first time already enmeshed in the throes of irreversible uremia, the precipi-



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tation process can be surmised only in retrospect and only provided an adequate history is available. These four conditions are hydro-nephrosis and pyonephrosis causing an obstruction, with gradual destruction of the renal parenchyma; long-standing pyelonephritis; arteriolar nephrosclerosis secondary to malignant hypertension; and chronic glomerulonephritis.

The first of these is possible, perhaps, on the basis of pelvic carcinoma with obstruction of the ureters. Such a lesion might be related to the pulmonary mass and one could even postulate cerebral metastases resulting in convulsions with some localizing signs. However, it is very unlikely that such advanced pelvic disease could be present for more than a year without causing death or at least other evidence of an advancing malignant process. I have no reason to suspect more benign causes of obstruction. One small point against this type of renal destruction is the fact that the one kidney shadow discerned by Dr. Eyler is believed to have been small. I might expect an enlargement of the kidneys behind a total obstruction.

Chronic pyelonephritis is a more difficult possibility to discard. I have no real evidence for or against it. Evidence of active infection need not persist into the end-stage of chronic pyelonephritis. The patient did show few to numerous white cells in various specimens, but this can occur in advanced renal disease whatever its etiology. Without a past history suggestive of acute pyelonephritis, I can say only that a burned out chronic pyelonephritis is a possibility but is less likely than one of the two remaining categories.

In a recent article, Saphir and Taylor present evidence that the renal lesion in so-called malignant hypertension is most commonly a diffuse chronic pyelonephritis rather than the classic arteriolar nephrosclerosis usually described in conjunction with this syndrome. Did this man have malignant hypertension leading to one or the other of these pathologic entities? Or did he have the fourth of my original list, chronic glomerulonephritis? Again, the history is not too helpful in reconstructing the initial phases of the disease. Statistically, the age of the patient is somewhat against either of these diagnoses, since both malignant hypertension and chronic nephritis usually lead to death before the fifth decade. Nevertheless, individual pa-

tients do survive much longer, and cases in clinicopathological conferences rarely conform to statistics. The episode that this patient experienced a year before death, with facial edema, nocturia and hematuria, is a little more suggestive of chronic glomerulonephritis than that of nephrosclerosis. I do not know the level of the blood pressure at that time, but a single reading in the terminal episode was 200 systolic, 100 diastolic. The level is usually maintained at higher readings than this in malignant hypertension, but one can conclude little from a single reading. The disappearance of red cells from the urine in the terminal phase is somewhat disturbing; continued microscopic hematuria is commonly seen in chronic nephritis, but is likely to be intermittent in nephrosclerosis or in Saphir's pyelonephritis lenta. The negative eye grounds, if this finding is valid, are unusual in either condition, but are practically incompatible with the diagnosis of malignant hypertension. Of these possibilities, I favor chronic glomerulonephritis, with convulsions on the basis of uremia and hypocalcemia, rather than hypertensive encephalopathy.

What was the nature of the pulmonary lesion? I cannot conceive of a direct relation between it and the fatal renal disease and must regard it as an incidental finding. Was it related to the pleural effusion? The nature of the effusion does not allow one to classify it unequivocally as a transudate or an exudate. However, its presence and nature were perfectly compatible with the diagnosis of nephritis and uremia, and it is unnecessary to postulate the existence of a pleural neoplastic process related to the solitary mass.

Such a solitary, calcium-containing lesion may be benign or malignant. If benign, I may choose among the whole gamut of possible "red herrings" that can inhabit this location, perhaps a cyst with a calcified wall or a tuberculoma as the leading contender. If malignant and calcium containing, it is more likely to have been metastatic than primary. Rather than make a third independent diagnosis in the presence of primary renal disease and a history of a malignant bone tumor, it seems reasonable to relate this mass to the previous tumor. This is said to have been an osteogenic sarcoma. Its history is quite unusual for an osteogenic sarcoma. This bone tumor is a highly malignant



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one, commonly occurs in a younger age group unless associated with Paget's disease or as a result of malignant changes occurring in a previously benign chondroma, which may have occurred in the case under discussion. The presence of pain usually causes the patient to seek medical aid long before seven years have passed. The lesion metastasizes early. The type of treatment given this man was totally inadequate to deal with a tumor of this nature. Osteogenic sarcomas are not radiosensitive and local excision is hardly the treatment of choice for a lesion whose five-year survival rate, even when treated with amputation, is less than 20 per cent. Nevertheless, there are types of osteogenic sarcoma of the sclerosing, fibrous and cartilaginous forms that are more indolent, less malignant and less painful than the commoner, more anaplastic type. Such lesions have been known to produce pulmonary metastases as late as fifteen years after removal of the primary tumor. Such delayed metastases are often solitary and frequently show flecks of calcium. I shall therefore call the pulmonary lesion metastatic osteogenic sarcoma of a relatively low grade of malignancy. Perhaps recurrent disease will also be found in the region of the original site of the tumor. If so, one might expect an elevated alkaline phosphatase, but I am told this man had a normal value.

In summary, and with the weight of statistics heavily against me, I think the diagnoses are chronic glomerulonephritis, with a pleural effusion on this basis, and metastatic osteogenic sarcoma.

CLINICAL DIAGNOSIS

Generalized neoplastic disease, ?osteogenic sarcoma, ?bronchogenic carcinoma.

DR. KELLEY'S DIAGNOSIS

Chronic glomerulonephritis, with pleural effusion. Metastatic osteogenic sarcoma.

ANATOMICAL DIAGNOSIS

Chronic glomerulonephritis.

Metastatic chondrosarcoma of lung (after 12 years)

Hydrothorax, left.

PATHOLOGICAL DISCUSSION




DR. DAVID KAHN: The post-mortem examination on this patient showed a number of interesting findings. First, Dr. Kelley was quite right about the cause of the renal failure: the patient did have chronic glomerulonephritis. Grossly, the kidneys did not appear as end-

stage, small, contracted kidneys but weighed 300 gms. and had only a moderately granular surface and some irregular atrophy of the cortex. However, histologically almost every glomerulus was involved, the changes varying from complete fibrosis of the glomerulus to intercapillary fibrosis with stiffening of the tufts. No completely uninvolved glomeruli were found. An occasional epithelial crescent could still be made out, but there was no other evidence of an acute or active process. There was, of course, a great deal of tubular atrophy with interstitial fibrosis. There was certainly very little normal renal parenchyma left.

The left pleural cavity contained 200 to 300 cc. of fluid. The left lower lobe of the lung was firm and indurated and almost completely replaced by a tumor 7 x 6 x 6 cm. in diameter. There was a narrow rim of lung surrounding the tumor peripherally. The tumor was gray and firm and contained a few gritty areas of calcification. There was an extension of the tumor along the inferior pulmonary vein into the left atrium. There was a second separate tumor mass 4 x 3 x 3 cm. in diameter in the lingula of the left upper lobe quite close to the hilus. When sections of the tumor were compared with the sections of the tumor removed from the region of the elbow twelve years before, it was evident that in certain areas they were almost identical; there is no doubt that the lung tumors were metastases. Definite classification of this tumor is somewhat difficult. At the operation the tumor was extraosseous, with no connection to bone, but appeared to arise from a fascial sheath with no capsule or other sharp line of demarcation from the surrounding muscle that it had infiltrated. At post-mortem examination, except for the scar, nothing was found in the elbow at the site of the original tumor. When we reviewed the original sections shortly after the patient was admitted, we believed that malignant synovioma was most compatible with the histology, position and clinical course. When we examined sections from the tumor in the lung it became evident that one of the cardinal features was cartilage formation. The tumor was composed of cords and strands of small undifferentiated polygonal cells, which were divided by bands of hyaline material that in many areas took on the staining quality of cartilage. In other areas there were large clumps of poorly formed but



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easily recognizable cartilage and an occasional band of poorly formed osteoid that in some areas was calcified. The cartilage appeared to be definitely neoplastic and not metaplastic. We think this tumor should be classified as a chondrosarcoma with metaplastic bone formation certainly, its growth pattern with the slow course, massive lung metastases and invasion of the pulmonary veins and left atrium are what is often seen with a chondrosarcoma. Others might consider osteogenic sarcoma, chondrosarcoma type, a better name. Recently, we have seen 2 other cases of bone tumors with somewhat similar histology, one with multiple bone lesions and the other with a solitary lesion in the wrist. Both these patients had only local treatment with local recurrences twelve and fifteen years later, and the question arises, "What should now be done for these patients?" The recognition of this group of tumors if possible, is therefore of more than academic interest. We did not have permission to examine the brain in the case under discussion; with the tumor growing into the left auricle a tumor embolus is certainly a possibility. The heart was hypertrophied, weighing 590 gm., and the liver showed an incidental portal cirrhosis.

PHS-INTERIOR WORKING ON INDIAN MEDICAL CARE BUDGET

How much Public Health Service will be allowed to ask of Congress to finance the Indian medical care program next fiscal year will be determined by the Budget Bureau on the basis of information now being supplied by PHS and the Indian Bureau.

At the start of the next fiscal year, July 1, 1955, PHS takes over from the Indian Bureau responsibility for the medical care in the reservations. The Indian Bureau has \$22 million for medical care this year; presumably PHS, which expects to put some more trained health personnel into the program, will be allowed substantially more. Meanwhile, Public Health Service is continuing its study of Indian Hospitals and the need for improvements.

Dr. Van M. Hoge, Assistant Surgeon General, is in charge of this survey, as well as the liaison work with the Department of the Interior and the conferences with the Budget Bureau. Dr. Hoge emphasizes that all physicians and other health personnel working for the Indian Bureau

will be retained. A recruitment campaign now is under way to obtain more physicians to work for PHS on the reservations.

—AMA Washington Letter.

HOUSE COMMITTEE APPLAUDS SHIFT OF INDIAN MEDICAL PROGRAM

A report by the counsel for the House Interior and Insular Affairs Committee, which has just been released, reviews the Indian medical care problem and notes the improvements to be expected when Public Health Service takes over responsibility for Indian hospitals next July 1.

George W. Abbott, counsel for the committee, said the transfer of the Indian medical program from the Indian Bureau in the Department of Interior to Public Health Service in the Department of Health, Education, and Welfare will:

1. Substantially overcome "gradually worsening" personnel limitations of the Bureau's health service.
2. Substitute a purely medical agency (Public Health Service) for the basically non-medical Bureau of Indian Affairs.
3. Encourage closer cooperation between federal and state health agencies in effecting transfer to states and local or private agencies of responsibility for supplying Indian health services.

Mr. Abbott stated that more than 25 per cent of Indian Bureau employees (3,270) were assigned to health matters. In view of the change, he noted that the Bureau's budget should show a "substantial reduction" next year. A sub-committee which has been studying all Indian problems meanwhile complained of the "free loaders" or "professional Indians" who have been benefiting from medical and other services "under the guise of incompetent Indians." The subcommittee indicated it hopes that Public Health Service will be able to draw "rather tighter lines" of eligibility to comb out the "free loaders". —AMA Washington Letter



INFECTIOUS MONONUCLEOSIS, a 2 minute Abstract

CLINICAL ASPECTS:

1. Posterior cervical adenopathy.
2. Pharyngitis.
3. Occasional white tonsillar exudate.
4. Febrile onset, with headache and malaise.
5. Nausea, vomiting, occasional abdominal pain.
6. Drowsiness is an occasional symptom.
7. Occasionally a maculo-papular or "rose" rash.
8. Splenic enlargement is noted in 50% or more cases. Rupture of the spleen has been reported.
9. Hepatitis with jaundice is a frequent finding.
10. CNS findings may be meningitis, encephalitis or neuritis.
11. Clinical evidence of cardiac involvement has been reported.

DIAGNOSTIC ASPECTS:

1. Leukopenia with a normal differential is noted early in the disease, with leukocytosis due to relative increase in the lymphocyte count, noted after the 14th to 16th day.
2. Blood smears at about the 10th day will reveal many "Downey cells."
3. Significant heterophile agglutination titers will be evidenced about the 10th day.
4. False positive Wasserman or other serological tests have been reported but found to be transient.
5. Urinalysis may show transient albuminuria.
6. The spinal fluid may show an increase in lymphocytes and total protein.
7. Liver involvement may be ascertained by changes in the protein pattern, (Electrophoresis), Thymol Turbidity, and Cephalin Flocculation or Bromsulphophthalein excretion.

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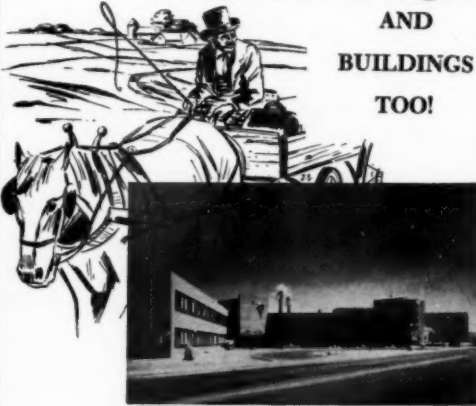
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THE *President's* PAGE

COMMITTEES OF THE ARIZONA MEDICAL ASSN., INC.

THE COMMITTEES OF THE ARIZONA MEDICAL ASSOCIATION, INC., HAVE MANY ACTIVITIES AND THESE REQUIRE A GREAT DEAL OF WORK, BOTH BY THE EXECUTIVE SECRETARY AND HIS STAFF, AND BY MEMBERS OF THE ASSOCIATION WHO HAVE ACCEPTED APPOINTMENT TO THE VARIOUS COMMITTEES. IT MIGHT SURPRISE SOME OF YOU TO KNOW THAT THE MEMBERSHIP OF THE VARIOUS STANDING AND SPECIAL COMMITTEES TOTALS ONE HUNDRED AND FORTY. A VERY FEW OF THESE COMMITTEES HAVE DUTIES THAT REQUIRE ONLY A MINIMUM OF TIME, BUT MOST ARE EXTREMELY ACTIVE AND ASK OF THEIR MEMBERSHIP MANY DAYS OF EFFORT AND TRAVEL. IT WOULD BE ENLIGHTENING TO THE MEMBERSHIP OF THE ASSOCIATION, IF THEY COULD ATTEND THE MEETINGS OF SOME OF THESE COMMITTEES, TO SEE HOW EARNEST AND CONSCIENTIOUS THEIR WORK IS. MANY OF THE MEMBERS HAVE COME TO PHOENIX OR TUCSON FROM DISTANT PORTIONS OF THE STATE AT THEIR OWN EXPENSE AND AT THE EXPENSE OF A DAY OF FREE TIME. WHEN WE CONSIDER THE FACT THAT MANY OF THESE COMMITTEE MEMBERS ARE ALSO VERY ACTIVE IN ORGANIZED MEDICINE ON A COUNTY LEVEL, WE BEGIN TO SEE HOW MUCH SACRIFICE THEY ARE ACTUALLY MAKING. IT IS HOPED, HOWEVER, THAT THE FEELING OF A TASK WELL DONE COMPENSATES FOR THE EFFORT EXPENDED BY EACH MEMBER OF THE COMMITTEE. THE ASSOCIATION CAN CERTAINLY THANK EACH ONE OF THEM.

OSCAR W. THOENY, M.D.

PRESIDENT, ARIZONA MEDICAL ASSN., INC.

Editorial

ARIZONA MEDICINE

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The Editor sincerely solicits contributions of scientific articles for publication in ARIZONA MEDICINE. All such contributions are greatly appreciated. All will be given equal consideration.

Certain general rules must be followed, however, and the Editor therefore respectfully submits the following suggestions to authors and contributors:

1. Follow the general rules of good English, especially with regard to construction, diction, spelling, and punctuation.
2. Be guided by the general rules of medical writing as followed by the JOURNAL OF THE AMERICAN MEDICAL ASSOCIATION. (See MEDICAL WRITING by Morris Fishbein).
3. Be brief, even while being thorough and complete. Avoid unnecessary words. Try to limit the article to 1500 words.
4. Read and re-read the manuscript several times to correct it, especially for spelling and punctuation.
5. Submit manuscript typewritten and double-spaced.
6. Articles for publication should have been read before a controversial body, e.g., a hospital staff meeting, or a county medical society meeting.

The Editor is always ready, willing, and happy to help in any way possible.

PRAISE WHERE DUE

LIFE is replete with examples of misdirected praise. It is common knowledge, that although it is the star of the play who gets his name in lights and gets all the press notices, that in reality the number of behind-the-scene workers who attend to the laborious details in connection with the play are in very large part responsible for its success. Yet this army of "forgotten men" labor silently and unobtrusively, never participating in the blaze of publicity and praise, and seldom complaining at the lack of it.

This illustration is applicable in principle to almost every enterprise in the world today. One sees it at work in governments, in business, and even in churches and families. This publication is no exception.

It is refreshing and gratifying, therefore, to have the work of our very good business manager and publisher recognized. In a recent letter, the past president and present historian of the Woman's Auxiliary of the A.M.A., Mrs. Clarice H. Hamer, has accorded him high and well-deserved praise. She has very kindly passed on favorable comments from other Auxiliary members concerning our Journal and its co-operation with the Auxiliary work. She has pointed out with gratitude his part in this co-operation.

We heartily join Mrs. Hamer in this salute to Mr. McMeekin and his tireless efforts in behalf of our Journal. Furthermore, we extend our thanks to the many others who work constantly and without praise; our state secretary and his aides, our own secretaries, Mr. McMeekin's secretary, the printers, our contributors, and our associate editors, to name only a few. Not one of these could we do without.

Again we thank you all, and thank you, Mrs. Hamer, for bringing this matter to mind.

AMEF NEARS ONE MILLION MARK

SEVERAL large contributions from state medical associations have boosted the American Medical Education Foundation nearer to its goal of two million dollars in 1954. The California Medical Association recently contributed \$100,000. Another large contribution came from the Arizona Medical Association in the amount of \$7,230, which represents a \$10 per member dues increase voted for AMEF by the association. Both Arizona and Utah have followed Illinois physicians by voting a dues increase as a method of increasing contributions from their states.

Since Jan. 1, 1954, the Foundation has received a total of \$968,000 and expects to reach the one million mark in September.

TOPICS OF *Current Medical* INTEREST

RX., DX., AND DRS.

By GUILLERMO OSLER, M.D.

A RECENT editorial in the Washington, D. C. 'Medical Annals' by Dr. Thomas McP. Brown of George Washington University hails and describes the coming era of "ANTICIPATORY (or preventive MEDICINE)." . . . During this golden time the true basic mechanisms of disease will be known, and the superficial relationships (such as stress and hypertension or ulcer) will be archaic. The domination of the lay press will be gone, since no drug can be used until a 3 to 5 year follow-up has been published. (This will eliminate use of penicillin on demand, and the "tragic deficiencies" from cortisone). . . . Possibly two kinds of doctors will be available,—the 'non-operating' doctor (formerly the internist and specialist), and the 'operating' doctor. This will bring back, by its simplicity, the patient-physician relationship, and will provide physicians so well-trained in physiology that they can anticipate chronic illness and prevent it. . . . Dr. Brown did not say 'when', but since medical training and practice develop by evolution we can probably dream of it (until the next paragraph) and let things take their course.

Since this is a column of pure science, and not a lay publication, perhaps we can be forgiven for mentioning AN INCOMPLETELY-BAKED DRUG. A new chemical (a fencholate, by the Merrill Co.) was mentioned during the summer for trial in HISTOPLASMOSIS and even COCCIDIOIDOMYCOSIS. Dr. Charlotte Campbell has worked with an antibiotic called 'NYSTATIN' at the Walter Reed Army Medical Center. Mice infected with *Histoplasma capsulatum* had a high rate of survival (95%) after treatment, even when it was started late, compared with a uniform mortality in the untreated. . . . This publication, quotation, and even hope will not be a part of the 'era of anticipation', though it looks as though the name fit the present tendency better than the future plan.

To anyone who has had to treat a child with severe NEPHROSIS it is encouraging to find a routine which seems to help. Greenman and Danowski of Pittsburgh used ACTH (100 mg. daily for 28 days), penicillin, and a very low sodium diet. (Nitrogen mustard was of no value). . . . Edema disappeared first, and the children became normal or were improved in a high per cent of cases. Relapses responded to re-treatment. The low sodium caused trouble for a few.

The occurrence of POLIO IN FAMILIES has been studied by Horstmann and McCollum of New

Haven. The methods are not practical except for research, since they consist of tissue-culture for virus in the stools. The test is quick, however. . . . Ninety-one contacts of 32 cases were studied, and 28 were found to be infected with Type I poliomyelitis virus. Thirteen of these had minor symptoms, and 15 had none. . . . Studies for resistance of the contacts showed that a high percentage of the younger susceptibles became infected, while those over 15 years were rarely involved. . . . We seem to be edging up closer to a knowledge of polio epidemiology.

PERSPIRATION ODOR is largely produced by certain bacteria, says a secretary of the A.M.A. Committee on Cosmetics in 'Today's Health'. . . . Deodorant creams and liquids are the only materials which will inactivate the bacteria. Soap and water will clear away some of them, but have no inactivating effect. . . . The apocrine glands do not function in children, and are less active in oldsters. Adults vary in the intensity and character of 'sweat'. . . . Oddly it has not yet been possible to combine the logical agents, soap and a deodorant.

Doctors who can write fiction occasionally exist, especially in England. Doctors who write autobiographies are even less common in any country. Few have enough to say which would be salable. . . . A recent book of BRIEF, TRUE PERSONAL STORIES BY PHYSICIANS is good, and should sell. It is called "When Doctors Are Patients", and consists of 33 case histories of most common diseases. The advertising says "cool, heart-breaking self-knowledge". . . . The late Dr. Max Pinner had the idea years ago. He collected several dozen cases, including at least two from Tucson, but B. F. Miller excluded these when he edited the volume this past year. "Too many pulmonary cases" was his reason. . . . If you don't buy a copy you'll probably get one for Christmas.

VAGINAL TRICHOMONAS infection is very common, quite often symptomatic, and usually hard to treat. The number of methods which have been suggested is good evidence of the latter. . . . Even more hopeless has been the therapy of TRICHOMONAS IN THE MALE. It may be a source of infection for the female, and no specific or helpful method has been available. . . . Now however, Dr. Groat, and MacGregor have reported in the Michigan State Medical Journal on the use of ATABRIN in 4 cases, with notable success. The drug is logical, since it works in giardiasis. It was

Should Health be a Luxury?

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given to cases with a definite diagnosis (with 'morning drop' and backache) and in spite of the yellow skin discoloration. The patients, few 'tis true, were cleared of the infestation in three weeks. . . . Might be worth a trial.

The lateral POSITION FOR CHEST SURGERY has been disapproved by Lambert and colleagues at Eagleville Sanatorium (Pa.). It impairs ventilation of the lower, compressed, contralateral lung, and produces transient patchy atelectasis. The acidosis and carbon dioxide retention which tend to occur during anaesthesia may be worsened by the posture. The Overholt or supine position is better.

Are you seeing much **LEAD POISONING**? If you are, do you see much **LEAD ENCEPHALOPATHY**? If you do you could be interested in an article on a new therapy which succeeded in a few cases, described by Bessman, Ried, and Rubin in the Med. Annals of the D. of C. . . . They describe a 'chelating' agent for removal of active lead. The drug is a Calcium (Disodium) **VERSENATE**, prepared by the Riker Laboratories, Inc. The weak union with calcium allows it to combine with lead but not to remove calcium from the blood.

Some medical journals take a fanatic stand against **V.A. HOSPITAL PRACTICES**. The 'Norfolk Medical News' of Massachusetts is as militant as any we have seen. . . . It quotes a Boston newspaper report of a V.A. Director of Nursing, who said "V.A. not in competition for nurses," and the 'News' adds the comment that the salaries are 50 to 90% higher than for comparable categories in local voluntary hospitals. . . . The journal also tilts a lance at the attempts of a V.A. medical director to fill his new hospital by soliciting doctors to send in acute cases. It says that regardless of what the applicant patient reveals in the questionnaire concerning his financial status, "the V.A. hospital cannot (and does not) refuse to admit him." . . . Harsh words to the V.A., but you can't tell a flaw without a program.

PROSTATISM spares neither the lay nor medical plumbing, so keep your fingers crossed and take a clear look ahead. No ground has been gained in prevention, and it is irreversible by physical, chemical, or viologic means. . . . Hess, Roth, and Kaminsky survey the only means of treatment after it has become obstructive (ablation), and try to decide on ways and means for bettering the chances. . . . All approaches to excision have certain hazards, so skill is the major requisite. Next hardest comes mastery of the perineal technic. Easiest is the suprapubic transvesical. It is necessary to have mastery of all.

The disturbing frequency of **PROSTATIC CANCER**, even without symptoms and signs, has been stressed this past year. This creates a demand

for therapy, which is followed by new methods. . . . Surgery and hormones have a leading place, and now comes (from Iowa City, and the journal of Urology) a report on injections of **RADIOACTIVE GOLD**. . . . The best route of approach is transvesical (plus retropubic), with perineal injections later if an area has been missed. The radiation is obtained by injection of the gold solution into the fascial compartments, using a pressure syringe limiting the amount to 1 cc. per position, and injection from 15 to 30 cc. total depending on estimate of the number of grams of gland present. . . . Clinical arrest and even negative biopsies have occurred in about 50% of 100 cases, and the rectal and urethral complications are now notably reduced.

The status of a new **NARCOTIC ANTAGONIST** had to be viewed with uncertainty, until a report in 'Surgery' by Adriani and Kerr. Adriani is one of the 'Ralph Waters boys' from the first American school of anaesthesia at Wisconsin, and when he says "OK" it is good enough for Osler. . . . 'NALLINE' is N-allylnormorphine, and is actually derived from morphine. It is non-addicting. It will relieve the respiratory depression caused by morphine, most of the emesis and retching, and some of the hypotension. . . . It is urged that the dosage be kept low (10-15 mg.) to be effective. . . . The drug is most likely to be of use in hospitals and to anaesthetists. It does not replace morphine in the substitution treatment of addicts.

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Notes from the EDITORS' PEN

VETERANS HOSPITALIZATION

AS of September 1, the Veterans Administration had only two service connected cases awaiting hospitalization. At the same time 19,878 non-service cases had qualified for treatment and were awaiting hospitalization. For August, the average VA daily patient load was 109,450, compared with 105,486 in August of 1953.

AMEF INCOME NEARS MILLION

It is reported that the American Medical Education Foundation has received this year \$995,000 from 14,800 donors to October first. Of this amount, your Association contributed \$7,230. The Foundation will be happy to receive any additional individual donations.

NEW DEVELOPMENTS IN MEDICINE

Thomas H. Bate, M. D., Past President of our Association, and graduate of the University of Arizona, participated in a panel discussion on the subject: "New Developments in Medicine" presented by the University over station KOPO-TV (Tucson) Sunday, October 10th, last. Dr. Willis Brewer, Dean of the College of Pharmacy, acting as Moderator; Dr. Mary Caldwell, Professor of the Department of Bacteriology; and Dr. Albert Picchioni, Professor of the College of Pharmacy, with Dr. Bate, comprised the panel. The program was re-broadcast over CBS radio the following Sunday.

U. S. SAVINGS BONDS AND RETIREMENT

In setting up a retirement program the chief concern is where can I get a good interest return on my savings and at the same time take no chance of loss of principal. Series "E" U. S. Savings Bonds offer you those two things, plus the convenient and systematic method to purchase them through the Bond-A-Month Plan at your bank, whereby you authorize your bank to charge your checking account each month with the purchase price of a Savings Bond and deliver the bond to you with your statement.

Seven Hundred and fifty dollars each month invested in bonds will bring you one thousand dollars each month after 9 years and 8 months, the maturity period of the bond. In addition there is an automatic 10 year extension of your bond, after it matures. Your extended bond pays you interest on the matured value of the bond at 3% compounded, if held for the 10 years extension, and approximately 3% simple interest each year you hold it. You can cash them at any time or let them accumulate interest until needed. Bonds held through the 10 year extension period return you 68% on your original investment. The new Series "H" Bond is similar to the series E but it pays your interest by check each six months. It also pays 3% compounded if held to maturity. Savings Bonds are the best riskless investment available today and offer the ideal way to provide for your retirement.

AMA CLINICAL SESSION

Eighth annual clinical session of the American Medical Association will be held in Miami, Florida, November 29 to December 2, 1954, the lecture program, scientific and technical exhibits will all be presented at the Dinner Key Auditorium.

AN OPPORTUNITY TO VISIT EUROPE

Following the Annual Meeting of AMA in Atlantic City, June 6-10, 1955, special deluxe chartered airliners of "United" will leave New York International Airport Sunday, June 12, arriving in Paris the following morning. In addition to France, the countries of England, Italy, Holland, Belgium, Germany and Switzerland are on the agenda for visitation. The tour party will stay at luxurious hotels and motor coaches will provide interesting side tours to historic and scientific points. Plan now for this deserving holiday. For further details write AMA, Post Convention Tour, c/o United Air Lines, 5959 South Cicero Avenue, Chicago 38, Illinois.

ASSOCIATION ANNUAL MEETING

And remember — the 64th Annual Meeting of your Association will be held in Tucson, May 4 through 7, 1955, with headquarters at Hotel El Conquistador.

NOTE: This is a new column. Your Editor will endeavor to bring you short, timely news notes on important subjects which all medical doctors should read. If you have a special item or two, your contributions are solicited. Mail to the Central Office, 401 Security Building, Phoenix, marked to my attention.

R.L.F.

HORSE AND BUGGY DOCTOR HONORED

ROBERT Nelson Looney, who is not only dean of Yavapai Medical Society, but is the oldest member of the Arizona State Association, residing in the state, came to the Arizona Territory in 1896, going first to the mining town of McCabe. Here he built a small hospital and served the medical needs of the miners and the families of the surrounding area.

He married Martha Mayer, of Mayer, Arizona and they moved to Prescott in 1905 where they have been a valuable part of the community ever since. They have one daughter, Marjorie Belle, who lives with her husband, George Blodell and son in Hollywood, Calif.

Dr. Looney was the first State Health Officer, serving from 1912 to 1917. He can tell many dramatic episodes in connection with the duties of that office in the days when smallpox and diphtheria were prevalent and some frontier towns were resistant to control measures.

Dr. Looney was Yavapai County physician for more than thirty years, and also served as surgeon to the Santa Fe Railroad for fifty years. He served in the Territorial Legislature in 1905-6.

He was an avid sportsman, and has fished and hunted all over the Rocky Mountain area. In 1913, when he realized that the elk had been almost completely exterminated in Arizona, he began a campaign to restock the forests and personally underwrote the expenses of bringing the first herd down from Yellowstone Park.

The Yavapai Fair Association designated September 18 as "Doctor Looney Day" and ceremonies were planned to honor the 84-year old physician.

He arrived at the Fair in a horse and buggy and was greeted by a large crowd. Dr. C. G. Salsbury, Commissioner of Public Health brought greetings from the State Health Department.

Gary Vyne of the Prescott Sportsman Club, presented him with a resolution passed the week before at the State Meeting of the Arizona Fish and Game Association. He also begged for a chance to see what a doctor carries in his ever-present little black bag, stating that he had been



Dr. Looney (right) in a horse and buggy.

watching him for 20 years and never saw Dr. Looney without it. The bag was thereupon opened — and found to contain fishing tackle!

Mrs. Mary Sills brought greetings from the nurses, many of whom were in attendance in uniform.

Mrs. James Allen introduced Mrs. Looney, and on behalf of the Ladies Auxiliary presented her with a sheaf of red roses. She said that while Gary Vyne talked at length about Dr. Looney's elk, she wanted to point out that he also had caught a deer.

Dr. Joseph McNally brought greetings from the Medical Society, pointing out that many of its present members who had the privilege of working with Dr. Looney were sons of the horse and buggy doctors of fifty years ago who banded together to form the Society. He also read the following telegram from the State Association: "The members of the Arizona Medical Association extend cordial greetings and best wishes to you on this very unique occasion. To possess the distinction of being the senior member of our organization and only charter member of Yavapai County Medical Society with its merits special recognition. We offer warm congratulations to an outstanding fellow practitioner who has earned the love and respect of his many friends and colleagues." Arizona Medical Association, Oscar Thoeny, M.D., President.



Dr. Robert N. Looney at the Yavapai County Fair booth honoring him.

YAVAPAI GOES TO THE FAIR

ARIZONA'S oldest County Society observed its fiftieth anniversary at the Yavapai County Fair, September 17-19 with a booth and special ceremonies honoring Dr. Robert N. Looney, a charter member.

The booth was prepared with the help of the Auxiliary and carried out the theme of "Fifty Years of Service". Featured were the charter, issued October 25, 1904, and a large picture of Dr. Looney, who was among those receiving it fifty years ago. Extending across the back wall of the booth was a mural depicting the eternal race with the stork, the doctor first on horseback, then with horse and buggy, an early day car and finally in a streamlined number heading for the hospital. This was the work of Dr. William Shepard.

There were many pictures of Yavapai towns as they looked fifty years ago. There was Jerome with the smelter in the midst of the town, Prescott with its streetcar, and buggies tied up on Whiskey Row. There were pictures of the mill at Mayer, a panorama of busy Humboldt, and the "ghost towns" of McCabe and Poland were also represented. Congress was amazing.

Part of the picture gallery was made up of charter and early day members, Drs. J. N. McChandless, Warren Day, John MacDonnell,

Harry Southworth, Sr., John B. McNally, C. E. Yount, John W. Flinn, C. R. K. Swetnam, Eugene Fahy, Alvin Kirmse and Gail Allee.

Another section was devoted to these doctors in action with their horse and buggy rigs and early automobiles. A showcase contained chaps worn by Dr. John MacDonnell when he practiced at Crown King and made many calls on horseback.

There was a display paying tribute to those early day scholars, Dr. John W. Flinn and Dr. C. E. Yount. It revealed among other things, that Dr. Yount and Dr. R. N. Looney were the first civilian doctors in the United States to report cases of Malta Fever. This was in 1912.

Another showcase contained pictures of the first surgery done with spinal anesthesia at Whipple Hospital in 1907. The surgeons were Capt. Thomason and Dr. C. E. Yount. Ampules of Tropocaine that were used were also in the display. These were imported from Paris. Rubber gloves were also used for the first time at this operation.

There were bonehandled instruments and other old time medical equipment to be seen. There was a fine display of cure-all patent medicines as well as the favorite prescribed items and pictures of the drug stores that stocked them fifty years ago. Modern drugs were represented in bouquets of flowers made out of colorful

pills and capsules available today. These were surprisingly beautiful and attracted a lot of interest.

In constant attendance were two nurses, one in modern garb and one in the striped uniform and bibbed apron of 50 years ago. They carried a strong resemblance to Auxiliary members and distributed copies of *Today's Health*, like good Auxiliary members should.

The booth drew a large number of visitors and won a blue ribbon.

ANNUAL MEETING— SCIENTIFIC SESSIONS

THE 64th Annual Meeting of your Association will be held in Tucson, May 4 through 7, 1955, with headquarters at El Conquistador Hotel. The Scientific Assembly Committee under the able chairmanship of our President-Elect, Doctor Harry E. Thompson, will present an outstanding program for your edification. Details are well in hand and for your advance information, the Committee will present a series of articles commencing with this issue of *ARIZONA MEDICINE* giving you a biographical review of the prominent guest orators to appear on the Scientific Sessions Program. Plan now to attend and be sure to mark your calendar for this important event.



Louis J. Regan, M.D., LL.B.,
Loma Linda, California

Professor of Legal Medicine, College of Medical Evangelists, Loma Linda, California; Clinical Professor Professor of Forensic Medicine, Univ. of Southern California, School of Medicine; Dr. Louis J. Regan is Past President of the American Academy of Forensic Sciences; Past President of the Los Angeles

County Medical Association; and Member of the Committee on Medicolegal Problems of the American Medical Association. Author of "Medical Malpractice" (C. V. Mosby Co., 1943); "Doctor and Patient and the Law" (C. V. Mosby

Co., 1949); Chapters: "Law of Abortion" and "Legal Authorization for Autopsy" in Text "Legal Medicine" (C. V. Mosby Co., 1954); Chapter "Medicine and the Law" in Text "The Physician and His Practice" (Little, Brown & Co., 1954); and more than one hundred published papers on medicolegal subjects.

Dr. Regan, known to many of use, will return to Arizona and present during our Scientific Sessions, topics on the medicolegal aspects of practice.



Charles E. Smith, M.D.,
Berkeley, California

Dean of the School of Public Health, University of California, Berkeley, California, since 1949, Dr. Charles E. Smith received his medical degree at Stanford University in 1931 and D.P.H. at Toronto University School of Medicine, Department of Public Health and Preventive Medicine, becoming its Executive in

1939. President of the California State Board of Public Health; Member of the National Advisory Health Council, National Institutes of Health, U. S. Public Health Service; Member of the Commission on Acute Respiratory Diseases, Armed Forces Epidemiological Board; and Director of the Commission on Environmental Hygiene, Armed Forces Epidemiological Board.

Dr. Smith will discuss the "Current Status of Coccidioid Infection" and "Diagnosis of Coccidioid Infection" during our Scientific Sessions.

IMPORTANT ANNOUNCEMENT

American Board of Physical Medicine and Rehabilitation

The next examinations for the American Board of Physical Medicine and Rehabilitation will be held in Philadelphia, June 5 and 6, 1955. The final date for filing applications is March 1, 1955. Applications for eligibility to the examinations should be mailed to the Secretary, Dr. Earl C. Elkins, 30 N. Michigan Ave., Chicago 2, Illinois.

Interesting TOPICS

RECOMMENDED READING IN CURRENT MEDICAL JOURNALS

FACTS AND FANCIES ABOUT CANCER OF THE LUNG. D. W. Smithers, M.D., F.R.C.P., D.M.R. Dr. Smithers is director of the Radiotherapy Dept, Royal Cancer Hospital, and Radiotherapist for the Brompton Hospital for Diseases of the Chest. The lecture with above title, published in part in *British Med. Journ.*, June 6, 1953, is the B.M.A. Lecture delivered in Manchester, Eng., Nov. 12, 1952. It is to be followed by the Milroy Lectures by Dr. Richard Doll, on other aspects of lung cancer, in future issues of the B.M. Journal.

Dr. Smithers calls attention to the monograph by Adler published in 1912, "Primary Malignant Growths of the Lungs and Bronchi," in which Adler claimed that malignant neoplasm of the lung is a common disease which a physician might meet "any day in his practice amongst the young as well as amongst the old." By 1949 doctors in England and Wales were writing "cancer of the lung" on death certificates 25 times more frequently than they were in 1912.

There is no doubt today that the lung is one of the commonest sites for malignant disease,—primary and secondary. It is also clear that a real increase in the incidence of lung cancer has occurred in many parts of the world. A revolutionary improvement has taken place in the diagnosis of lung cancer, and the methods of diagnosis are discussed.

Twenty years ago (April, 1933), Evarts Graham started to do a lobectomy on a 48 year old doctor, and finding no satisfactory interlobar fissure, boldly carried out the first successful pneumonectomy for bronchial carcinoma. The patient is still living, and pneumonectomies are almost a daily procedure in any large hospital. The survival rates at five years for the patients undergoing pneumonectomy are around 20%. This author reports on 818 patients with proven diagnoses of bronchial carcinoma, seen from 1944 to 1950. Only 35 of these were treated surgically, and ten of these are alive three years or more after treatment. A radical course of x-ray therapy was given to 192 patients, and six of these are alive three years or more after treatment. Surgery offers a real chance of cure to the fortunate few, but at present does not more than touch the fringe of the problem presented by thousands of patients dying with lung cancer. Radiotherapy is shouldering the burden of treatment to an increasing degree, and is doing useful work in relieving suffering in a way which is not possible at present by any other means.

THE GENERAL PRACTITIONER VERSUS CARCINOMA OF THE COLON. A. Bruce Baker, M.D., Spokane, Wash. *Northwest Medicine*, June, 1953, pp 458-461.

Early diagnosis of cancer in this area is a myth. The patient with a really curable cancer in his large bowel looks and feels well. By the time symptoms have developed, many if not most of the cancers have progressed to the stage of incurability.

From a practical standpoint it might seem that the battle is lost before it starts. "This is far from the truth, however . . . of all cancers of the colon and rectum, 70 per cent can be seen through the sigmoidoscope and 50 per cent can be felt with the finger. The rest can quite satisfactorily be diagnosed in an early stage by x-ray." Therefore, general practitioners can make a significant contribution in early diagnosis of the colon and rectum. Very simple equipment and the will to be thorough in examination of any patient. Medical schools must stress the need for general practitioners to be proficient in sigmoidoscopy and teach the students to look on this procedure as a necessary part of the routine physical examination. All men now doing general practice should acquire the necessary equipment for doing sigmoidoscopy and become proficient in its use. Every patient on whom a barium enema is regarded as needed should, ipso facto, have a sigmoidoscopy. There is no excuse for any doctor to fail to carry out a digital examination of the rectum as a routine part of a general physical examination.

PEPTIC ULCER. Three articles, brief and to the point, present the roentgenologic aspects (Adams, roentgenologist), etiology and medical treatment (Maccubbin, internist), and surgical treatment (Horgan, surgeon), — in *Virginia Medical Monthly* for July, 1953.

TWENTIETH CENTURY CHANGES IN THE TREATMENT OF SEPTIC INFECTIONS. This is the Shattuck Lecture before the Mass. Med. Soc., delivered on May 21, 1953, by Sir Alexander Fleming, F.R.C.P., F.R.C.S., F.R.S., Professor of Bacteriology and Chief of the Wright-Fleming Institute for Microbiology, St. Mary's Hospital Medical School, London, Eng.

It appears in the *New Eng. Journ. of Med.*, June 18, 1953. This classic presentation of the advances in treating infections from the days of Wright's vaccines to the present antibiotic era has to be read to be appreciated. It defies adequate abstracting. Treat yourself to a half hour of pleasure and profit, by borrowing the journal and reading the whole article.

ARIZONA *Pharmaceutical* PAGE

BACKGROUND FOR PROGRESS

By Joseph A. Zapotocky, Ph.D.

Pharmacy College, University of Arizona

IF members of a profession are to continue to prosper and progress, they must make a sincere effort to improve their standards and the caliber of the service they render to their community. Pharmacy has shown its desire for improvement many times in the past, and this year it has again taken steps to advance its standards.

Although college courses in Pharmacy were available, there were no formal educational requirements previous to 1922. Then, in 1922 until 1927, a two year college course became mandatory. But then, even that was found to be insufficient and a three year course was adopted and kept in force until 1932 when the four year program became a necessity. The four year program has been in effect until recently when this, too, was found to be inadequate for the modern pharmacist who, as a member of the health team, must today absorb more knowledge and improve his skills and technics in order to give better and more proper service to his community. For that reason, the American Association of Colleges of Pharmacy, at their annual meeting in August of this year, felt that a five year course in Pharmacy had become necessary, and adopted the five year program of college training to become effective in the year 1960. Although the four year program provided the pharmacist with the necessary scientific and professional training required for professional service, it lacked training in the liberal arts so vital to his social, cultural, and moral development. With this broader training, the pharmacist will not only be able to understand and provide better pharmaceutical service to his community, but will also be able to understand and play a more prominent role in civic affairs, including the political, social and religious aspect of the work.

The College of Pharmacy of the University of Arizona, although one of the youngest pharmacy schools in the United States, recognized the need for such a broad program of education for pharmacists years ago and instituted the five year program in 1951. The graduates of this program receive extensive instruction in the physical sciences including Inorganic and Organic Chemistry, Qualitative and Quantitative Analysis, and Physics as well as the necessary mathematical courses. In the biological sciences, their course work consists of Botany, Zoology, Bacteriology, Physiology, Biochemistry, Anatomy and Pharmacology. Courses which are a direct asset to their future business needs, as English, Speech, Accounting, Business Management, Economics and Jurisprudence, are also a part of their study. In addition, they are free to choose courses in the social sciences, humanities, history, and political sciences. Their training for professional pharmacy extends over four years of the course and prepares them for all phases of pharmaceutical operations, such as retail or hospital pharmacy, detailing the medical profession, manufacturing, research, or further study for an advanced degree. Their study of the social sciences prepares them for better citizenship in their community.

With such a revised and expanded curriculum as a background for the practice of pharmacy, it is hoped that the pharmacist will be better able to perform his duties in a competent manner and to assume all phases of his professional and social responsibilities so as to bring ever increasing recognition to his profession as a member of the health team.

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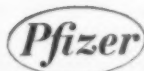
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Organization PAGE

CIVICS

Norman A. Ross, M.D., Phoenix, Arizona

THE NATIONAL SOCIETY FOR BRAIN INJURED, INC., 711 West Thomas Road, Phoenix, Arizona; Lynne Davis, Executive Director.

The Arizona Chapter of the National Society for the Brain-Injured plans gradual expansion of services for the brain-injured during the coming year.

Comprehensive diagnostic and medical treatment for the brain-injured is incorporated in the Society's proposed Brain-Injuries Clinic. This clinic will provide combined neurological, psychological, educational and language diagnosis of children referred by physicians.

The pre-school social classes will be reopened early in the fall. Remaining for a time under the guidance of volunteers for whom there will be a continuing in service training program, the pre-school social classes will be expanded to include a greater number of children and to conform more closely to the pattern of regular school hours and days.

Land has been acquired for and architectural plans are prepared for the Perry Institute on Brain Injuries; building will begin late in the winter. The program of public education on brain-injuries will continue throughout the year.

THE SOUTHWEST BLOOD BANKS, 710 East Adams Street, Phoenix, Arizona; W. Quinn Jordan, Executive Director.

It's heartening when doctors order a transfusion to know that ample supplies of the required blood type are on hand. But how many of us are familiar with the elaborate setup which assures us this blood is always available?

In an extremely efficient operation, without fanfare or publicity, Southwest Blood Banks, Inc., is the organization in this area which provides this necessary service. How many lives have been saved by transfusions of blood furnished by Southwest is not known, but it is known that on an average of seven minutes of the day, 365 days a year, someone receives a pint of blood through the services of this vast non-profit organization.

Providing service to small towns as well as large cities, Southwest operates in an area ex-

tending from Brawley, California to Lafayette, Louisiana, and from Las Vegas, Nevada to McAllen, Texas, on the Mexico border. Full-scale banks are maintained in Albuquerque, El Paso, Houston, San Antonio, Lafayette, Lubbock and Phoenix.

Phoenix is the corporate headquarters of the nation's largest medically-operated, self-supporting blood banking institution. Maricopa County Medical Society was the parent organization. Extent of Southwest's operations can be envisioned when we realize that an area of more than 375,000 square miles, containing more than 4,000,000 people, is serviced. During July, 1954, 275 different hospital, laboratories, and clinics throughout this area received blood supplies from Southwest.

The organization's board of trustees realize a two-fold responsibility — to the medical profession and to the public. Members of the corporation's board, representing five county medical societies, all are members of the American Medical Association, and each member bank is governed and advised by the local county medical society.

(Note this unique insurance feature)

For \$1 a year, a person can now be covered up to \$20 a pint for every pint of whole blood he may require for transfusion purposes. In addition, all dependent members of his family under 19 also may be covered for \$1 each, with a maximum charge of \$4 per family per year.

THE MUSCULAR DYSTROPHY ASSOCIATION OF AMERICA INC., Maricopa County Chapter, P.O. Box 6004; Marian Johnson (Mrs. F. E.) Secretary.

Thirty-six outstanding medical scientists presented papers relating to Muscular Dystrophy at the Third Medical Conference which was held at the Hotel New Yorker, October 8th and 9th, with an attendance of approximately three hundred doctors and medical authorities.

Mrs. Mildred Marion, past Chairman of the Chapter, is conducting a state wide census and

survey to determine numbers and needs of Muscular Dystrophy patients.

The Maricopa County Chapter of the Muscular Dystrophy Association is carrying out a program of direct service and social aid to Muscular Dystrophy patients.

Plans are being made for the National Campaign in November to raise funds to further this program, which is, however, supplementary to the main objective — that of making funds available for intensive research into the cause and cure of the disease.

• • •

ARIZONA TUBERCULOSIS AND HEALTH ASSOCIATION, 111 East Willetta, Phoenix, Arizona; Helen Watkins, Executive Secretary. This is your State Association Master TB Seal Sale letter. Look for the local version of same in your mail about Nov. 22.

Help Fight TB



Buy Christmas Seals

CULOSIS. "Every case of Tuberculosis is an indictment against society—an irrefutable piece of evidence that someone somewhere was either ignorant or callous to his responsibility to do his part in preventing unnecessary human suffering", asserted James E. Parkins, M.D., Managing Director of the National Tuberculosis Association during the 50th Anniversary Meeting of that voluntary organization of doctors and laymen.

There is no simple solution to tuberculosis today. There is no one "miracle drug" which promptly and permanently cure a case of tuberculosis. There is no ideal vaccine which can be universally used to prevent tuberculosis. But if modern knowledge about TB and modern techniques for its control are used to the fullest extent, tuberculosis can be defeated in Arizona.

November 22, 1954, marks the opening of the 48th Annual Sale of Christmas Seals; this is the campaign which finances not only the National Tuberculosis Association but its 3,000 State and local affiliate. Ninety-four cents of every Christmas Seal dollar is used in the State in which it is contributed for (1) Education, (2) Case-finding, (3) Rehabilitation, (4) Re-

"More in '54!"

Not more TB but more need for funds to control and eventually eradicate TUBER-

search—in some states. Of the remaining six per cent which is forwarded to the National Tuberculosis Association, one per cent is devoted to research (medical and social) and five per cent to the work of the National Tuberculosis Association.

A pair of 1954 Christmas Seals (they are still only a penny a piece) on every card, letter and package you send from now until Christmas will help to mean "More in '54". It will mean more can be done in Arizona. Let's "Seal TB out of Arizona". Do it today!

THIRD ANNUAL CANCER SEMINAR ARIZONA DIVISION — AMERICAN CANCER SOCIETY

JANUARY 13, 1955

Morning Session:

CANCER OF THE GASTROINTESTINAL TRACT — Gastric ulcer or gastric cancer — the physician's dilemma; The radiologist's diagnostic criteria in lesions of the upper gastrointestinal tract; Premalignant lesions of the colon and rectum — their diagnosis and management.

Afternoon Session:

CANCER OF THE GASTROINTESTINAL TRACT — continued. Problems of the rehabilitation of the ostomy patient; BONE TUMORS — Symposium on diagnosis and treatment: Pathological Aspects, Radiological Aspects, Surgical Aspects.

JANUARY 14, 1955

Morning Session:

THE DEVELOPMENT OF PRESENT DAY TREATMENT FOR CANCER OF THE BREAST PROGRESS IN CANCER RESEARCH.

Afternoon Session:

CANCER OF THE FEMALE GENITAL TRACT — The role of cytology in the detection of early uterine cancer; Symposium: The present day controversy in the management of uterine cancer; Clinical behavior of ovarian tumors; Urinary tract complications of radical pelvic surgery for cancer.

JANUARY 15, 1955

Morning Session:

CANCER OF THE GENITO-URINARY TRACT — Testicular tumors: Classification, diagnosis, management; End results in treatment of prostatic cancer; The differential diagnosis of hematuria; The clinical behavior and curability of bladder cancer.

Woman's AUXILIARY

A JOB TO BE DONE

CERTAINLY it is the duty and privilege of a legislative chairman in each organized auxiliary to become indispensable to her group. It is her special job to organize and present legislative news and information in a concise, effective, interesting manner. She has a real challenge. She must present material, which takes much time and study to understand and remember, to a group which is already busy with a good many other projects. To accomplish her objective, she must first take stock of her own knowledge along these lines, and then after evaluating it, begin a re-educating program for herself.

A review and study of our constitution is very helpful and a real inspiration, and because the House and the Senate of our legislative branch of the government each has its own rules by which it operates, it is important to have some knowledge of how each House operates and how a bill becomes a law. Being fortified with this knowledge helps greatly in understanding the material which comes from our AMA Washington office. Teaching herself to become more cognizant of politics in general by being alert to news items of this nature, and participating in and contributing to civic groups who are interested in good government, help to prepare her for her job. Most of us in our busy lives forget that giving our views to our congressmen on issues of the day is a priceless privilege and responsibility and we should push ourselves out of our complacent ruts to exercise that privilege. Unless we, as legislative chairmen get in the habit of letting our views be known to our congressmen, we can hardly hope to influence our groups to practice the same.

It is ineffectual and useless to present material of legislative nature to a group that may need to re-educate itself. It is very likely that it does. Why not take them through the program you outlined for yourself? With limited time each meeting, you can only hope to cover the high spots, but it will serve to spark interest and will help to make the material more understandable. Teaching members how a bill becomes a law and how to write to their congressmen would engender confidence in themselves

and serve as an impetus to acquiring the habit of active interest in legislative affairs.

It seems redundant to present an argument for active interest and intelligent understanding of legislation concerning the medical profession, but there are too many doctors' wives who seem to think that it is out of the realm of their responsibility. More than in any other group of women, it behooves us all to re-educate and inform ourselves, then to act. Our busy husbands have little time to study administration proposals and less time than we to act upon them. We must be able to understand and intelligently discuss with them legislation as it comes up. We can do our part in letting those whom we have elected know that what we believe to be in the best interest of the American people is the desire of the medical profession.

Mrs. L. D. Sprague
State Legislative Chm.

GILA COUNTY PRESIDENT'S REPORT

THE Woman's Auxiliary to the Gila County Medical Society boasts a total of thirteen members. While the membership is small they strive for accomplishments that are big.

Every week the Auxiliary presents a radio program, fifteen minutes long, dealing with some pertinent medical problem. The transcribed program, of course, comes in record form from the American Medical Association in Chicago but a faithful member sees that the records are at the radio station on time and she also sees that they are returned to Chicago.

Nine of our members are trained to give audiometer screening tests and every year for the last three years and again this year the Auxiliary will assist in conducting "hearing tests" in the local schools in conjunction with the Easter Seal Program of the Arizona Society for Crippled Children.

Another member will be very active in the Nurse Recruitment Program and she works closely with our schools and public nurses at the opportune time.

Our gals while rather occupied with families and all that makes up a doctor's household still

give generously of their own time and efforts as the results from this small group prove:

Mr.: Clarence Gunter
President, Woman's Aux.
Gila County Medical Soc.

MARICOPA COUNTY PRESIDENT'S REPORT

THE Maricopa County Medical Auxiliary started the 1954-55 year with a morning meeting followed by lunch at the Arizona Country Club October 19.

The program for the year was presented by the new board members, and Dean Carman of Trinity Cathedral gave a talk about the Red Feather drive.

This year, the Auxiliary will again join with the Nurses' Association in an educational program directed to young women to interest them in nursing as a career. This will culminate in Nurse Recruitment Week as proclaimed by the governor. During this week a film on nursing will be shown to all interested girls at the high school level.

Morning coffees will again be used to introduce the new auxiliary member to our group.

A check for \$2850.00 was presented to the Child Guidance Clinic in May. As many of our members are serving on the clinic board and the doctors are serving in an advisory capacity, we feel this project to be worthy of our continued support.

Our program at the November meeting, a panel discussion on "Our Teen-Agers" was very successful. Mrs. Joseph Bank was moderator.

The Auxiliary will have its only social function December 4 at the Phoenix Country Club — an informal dinner-dance.

Mrs. Robert H. Cummings
Maricopa County President.

PIMA CO. WOMAN'S AUXILIARY FOR 1954-55 YEAR

"LEADERSHIP in Community Health" is the theme for this year's Auxiliary work as stated by our National President. In accord with this theme the Pima County Medical Auxiliary has embarked on an ambitious program of health education and individual participation in volunteer work for health organizations, in addition to giving, as an organization, as much financial support as possible to worthy health agencies.

Our health education program will reach almost everyone in this area through the School Health Radio Quiz program which we sponsor and supervise, the continuation of an adult radio health program, and through the increasing sale of Today's Health Magazine subscriptions.

The Philanthropic committee has completed setting up the Medical Section of the Community Chest for 1954-55 and our members are soliciting all M.D.'s as well as hospitals. We will be responsible for the Medical Section of the Red Cross Drive as well.

Many of our members will be trained during the year in Civil Defense first-aid courses. All of us will benefit by the extensive schooling our Civil Defense chairman will receive at a workshop. We will assist the Pima County Medical Society in their Civil Defense program whenever possible.

So that we may vote wisely on all issues involving health and the Medical Profession, our Legislative Chairman will keep us well informed.

We will continue to work for Nurse Recruitment and the establishment of more "Future Nurses" clubs in our schools. One of the student nurses on scholarship at St. Mary's receives a monthly "spending-money" allowance from us.

Our activities during the early part of the year will be well spiced with social functions designed to help us get to know one another better. Early in October we held a very successful "Get-Acquainted Patio Buffet Supper" for Pima County doctors and their wives with over 200 attending. In November we will hold the annual Auxiliary Membership Coffee. December brings a social hour with our husbands for a holiday toast after our regular meeting.

Pima County will host the 64th Annual Convention of the Arizona Medical Association on May 4, 1955 through May 7th. We are looking forward to seeing our friends from around the state again.

Our calendar looks full for the 1954-55 year — but with the participation of the majority of our members it will be a successful and rewarding year for the Pima County Medical Auxiliary.

Respectfully submitted
Betty (Mrs. Joseph) Kinkade
President, Woman's Aux. to the
Pima County Medical Society

WOMAN'S AUXILIARY TO THE YUMA COUNTY MEDICAL SOCIETY

THE Yuma County Auxiliary is again doing audiometer tests on freshmen and juniors of Yuma Union High School starting the second week in October. Mrs. James Volpe, our Public Relations chairman is heading this project.

A Future Nurses Club has been organized in high school, it has 35 members to date. This was accomplished by Mrs. Charles S. Powell (Nurses Recruitment Chairman) in conjunction with The Nurses Association District No. 7 and the school nurse Miss Klaenhammer (their adviser). We hope to train these girls this fall to take over the audiometer tests next year in high school and leave us free to branch out in the grammar schools.

For the AMEF fund, we're starting a Round Robin Food Basket among members, also a gift raffle at each meeting.

Social plans for the year include a Christmas party for members and their husbands.

In January, a pot luck supper at my home for Mrs. Brick Storts and Mrs. Roy Hewitt when they visit us with their National reports.

A tea for the Future Nurses Club in March at the home of Mrs. Charles S. Powell.

Our May meeting will be a patio party combined with the doctors at some ones home.

Other programs include one on Civil Defense, Legislation and a speaker on Local law enforcement proceedings.

Marian (Mrs. John F.) Stanley
Yuma County President

YAVAPAI COUNTY PRESIDENT'S REPORT

THE Yavapai County Medical Auxiliary is looking forward to a good year. We feel we have already gotten off to a good start. Early this summer our Public Relations Chairman had a series of summer health records broadcasted on the radio. This series has been completed and a new series has been started with excellent comment on them.

The County Medical Society had a booth at the county fair showing fifty years of medical service to the county and the Auxiliary helped the doctors in the booth's construction as well as explaining various things in the booth to the public. The booth won first prize plus

one hundred dollars. We were all very proud we were able to help with this project.

Our opening meeting was held in October with a dinner at the president's home given by the officers.

All the chairmen were appointed in May and each one has been receiving material from National.

In November we will give a food basket to a needy family for Thanksgiving.

Plans for our Charity Ball on December 4, are already under way. We have a very good chairman again this year and hope to be as successful as last year. We would like very much to see all of you at the Ball. Proceeds from the Ball go to the Community Hospital.

At Christmas time a basket of food and clothing will be given to a needy family.

In January, cookies will be made for the patients at Whipple for their Sunday afternoon coffee hour.

Early in the year we will entertain the state officers.

In February we will have our annual rummage sale; profits made from this sale means contributions to Red Cross, Cancer, Nurses Loan, etc.

In the early spring a tea will be given at the hospital in connection with Nurse Recruitment Week.

During the year we will be called upon for help for the needy and we are always willing and ready to be of service.

The program outlined above is subject to the approval of the county members, but except for a few details is ready to start in full swing.

Dorothy Shepard, President,
Woman's Auxiliary,
Yavapai County Med. Soc.



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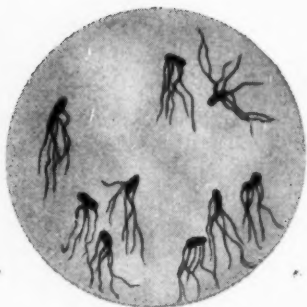
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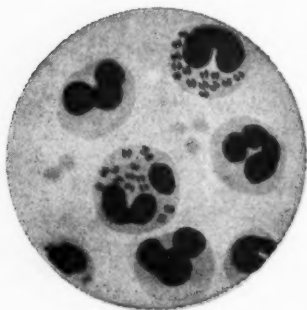
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